Lamont-Doherty Geological Observatory

MEASUREMENTS OF THE PARTIAL PRESSURE OF CO2 IN DESCRETE WATER SAMPLES DURING THE NORTH ATLANTIC EXPEDITION, THE TRANSIENT TRACERS OF OCEANS PROJECT

Taro Takahashi, David Chipman, Nathan Schechtman,
John Goddard, and Rik Wanninkhof

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INTRODUCTION

This report describes the gas chromatographic method developed for the determination of the partial pressure of CO_2 (pCO_2) in descrete water samples, and lists the data obtained during the seven legs of the Transient Tracers of Oceans Project in the North Atlantic Ocean, April - Oct.,1981. This project has been supported by the grants from the National Science Foundation:OCE-79-16574 for the development of the technique, and OCE-80-08349 and OCE-81-10646 for the field experiments and data reduction.

The CO_2 partial pressure was measured at 20.0°C in a thermostated bath on board the R/V Knorr, and all the reported values are thus referred to this temperature. On the basis of the data obtained at near-by stations and multiple analyses of single water samples, the precision of the measurements at 20°C has been estimated to be $\pm$ 1 uatm on the average.

To test the internal consistency among the alkalinity, total CO_2 concentration and pCO_2, the measured values of pCO_2 are compared with those computed at 20°C and 1 atm total pressure using the alkalinity and total CO_2 concentration values obtained by the potentiometric acid titration method. In addition, the total CO_2 concentration was computed using the measured values of the alkalinity and pCO_2, and is compared with that determined by the titration method. The discrepancies between the measured and computed values are listed for each water sample, and the mean of the discrepancies at each station is also presented. The computer programs used for computation of pCO_2 from the alkalinity and total CO_2 and of the total CO_2 concentration from the alkalinity and pCO_2 are listed at the begining of the data listing. In formulating these programs, the alkalinities contributed by carbonic,boric, silicic and phosphoric acids and water are taken into consideration, so that the computation is consistent with the computational method used for processing of the acid titration data for alkalinity and total CO_2 values. The apparent dissociation constants for these weak acids and water in seawater, and the solubility of CO_2 seawater are based on the following studies;

Mehrbach et al (1973) for carbonic acid,

Lyman (1956) for boric acid,

Sillen and Martell (1964) for silicic acid,

Kester and Pytkowicz (1967) for phosphoric acid,
Millero (1979) for water,
Culberson and Pytkowicz (1973) for activity of water, and
Weiss (1974) for CO_2 solubility.

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THE EQUILIBRATOR-GAS CHROMATOGRAPH SYSTEM FOR MEASUREMENTS OF pCO_2 IN DESCRETE WATER SAMPLES

The pCO_2 measurement system consists of a gas-seawater equilibrator, a gas chromatograph (a Perkin-Elmer Model Sigma 4 B)and a dedicated computer for data recording and processing (a Perkin-Elmer Model Sigma 10).

The Pyrex glass equilibration vessel (520 ml total volume) shown in Fig.1 is initially filled with seawater nearly to the top, leaving about 1 ml of gas space to allow for thermal expansion of water. After the temperature of the water sample is equalized with a bath temperature of 20.0°C, a standard gas (1000 ppm CO_2 in dry air) is introduced into the vessel through the valves V_1 and V_2 to displace about 50 ml (measured to $\pm$ 0.3 ml) of water out of the equilibration vessel. Since the tubings, air pump and sampling loop have been purged previously with the same gas, the equilibrator system is now filled with the standard gas of a known CO_2 concentration, and the gas pressure in the system is equalized with the ambient barometric pressure (measured by a recording barometer in the room) through a vent located on V_2. Since this procedure is done quickly, it is expected that little CO_2 is exchanged between the water sample and the carrier gas, and thus, the initial condition of the equilibrator system is precisely defined: i.e. the volume of water, and the pressure, volume, temperature and initial CO_2 concentration in the carrier gas are known. V_2 is then rotated to the position indicated in Fig.1, and the water discharge valve, V_7, is closed to establish a closed gas circulation system.

The carrier gas is circulated by an air pump at a rate of about 600 ml/min through the water sample, the valves V_5, V_4, V_2 and V_3, and the gas sampling loop (1 ml) attached to V_3. The precision needle valve, V_4, is to by-pass the main flow of gas, and is so adjusted to let about 50 ml/min of the circulating gas through the sampling loop. The temperature of V_3 and the sampling loop is maintained at a constant temperature of 45.0 $\pm$ 0.05°C to insure the constancy of the volume and temperature of the gas sample for CO_2 analyses. To sample a portion of the circulating gas for CO_2 analysis, the air pump is first stopped, and the gas in the sampling loop is allowed to be thermally equilibrated to 45 °C for ½ minute.

The gas pressure in the equilibrator system is also equalized within this period. The rotary valve, V_3, is then rotated to isolate the loop from the equilibrator system, and at the same time, to connect it to the G.C. system for CO_2 analysis. It allows high pressure pure hydrogen gas generated by an electrolytic process unit (see Fig.1) to flow through the loop and sweep the sample gas into the chromatographic column (about 6 feet of Chromosorb 102). As the sample flows through the column, CO_2 is separated from oxygen and water vapor. As soon as the sample is injected into the column, the vent valve V_6 is opened by a command from the computer for 0.6 minutes to vent oxygen out of the system. The vent valve is switched back to the G.C. system after this time to allow the passage of CO_2 into the Ni catalyzer column (at 380°C), where CO_2 is converted quantitatively to methane. The methane thus produced is introduced into the flame ionization detector, which is fueled by hydrogen and pure air(free of hydrocarbons). The methane signal is processed by the on-line computer, and the area under the G.C. peak for methane is computed. The vent valve V_6 is opened again for a period of 4 minutes (5 to 9 minutes after the injection) for water vapor to be vented out of the system. Under optimum conditons of a land-based air-conditioned laboratory, the G.C. system yields a reproducibility of $\pm$ 0.06%, whereas under shipboard conditions, it yields a reproducibility of $\pm$ 0.15%.

To determine the time required for equilibration of 470 ml of a typical North Atlantic deep water sample (700 μatm pCO_2 at 20°C) with about 100 ml of carrier gas with an initial pCO_2 of 1000 μatm or 400 μatm in the equilibrator, the pCO_2 in the circulating carrier gas was determined as a function of time. We have found that about 20 minutes of equilibration time is needed to achieve equilibration. Therefore, for routine determination of pCO_2 on board the ship, a water sample was equilibrated for 20 minutes or longer before the first CO_2 analysis was made.

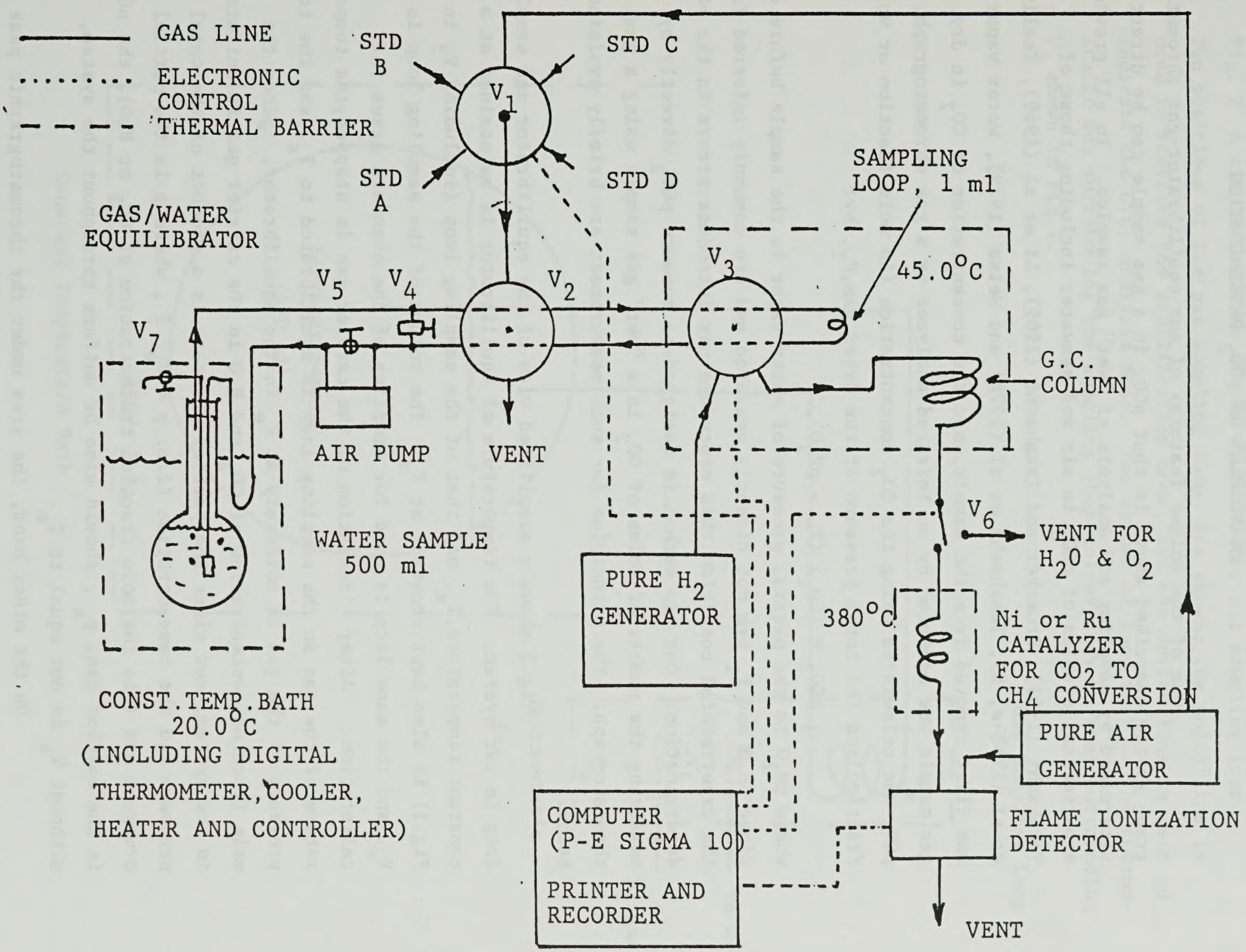


Fig. 1 Schematic diagram for the CO_2 equilibrator and G.C. system.

PRINCIPLES OF pCO_2 DETERMINATION

One of the unique features of our equilibrator-gas chromatograph system described above is that pCO_2 in a gas sample can be directly determined by sampling and analysis of "wet" gas samples. In all previous experimental studies of pCO_2 in air and seawater including those of Takahashi (1961), Broecker and Takahashi (1969), Li et al (1969), Keeling et al (1968-a, b), Takahashi et al (1976) and Weiss (1979), water vapor was first removed from the sample, and the concentration of CO_2 in dry gas sample was measured by an infrared analyzer or a gas chromatograph. pCO_2 was calculated using the CO_2 concentration (in mole fraction or volume fraction)and the total pressure of the dried gas,P_T, by:

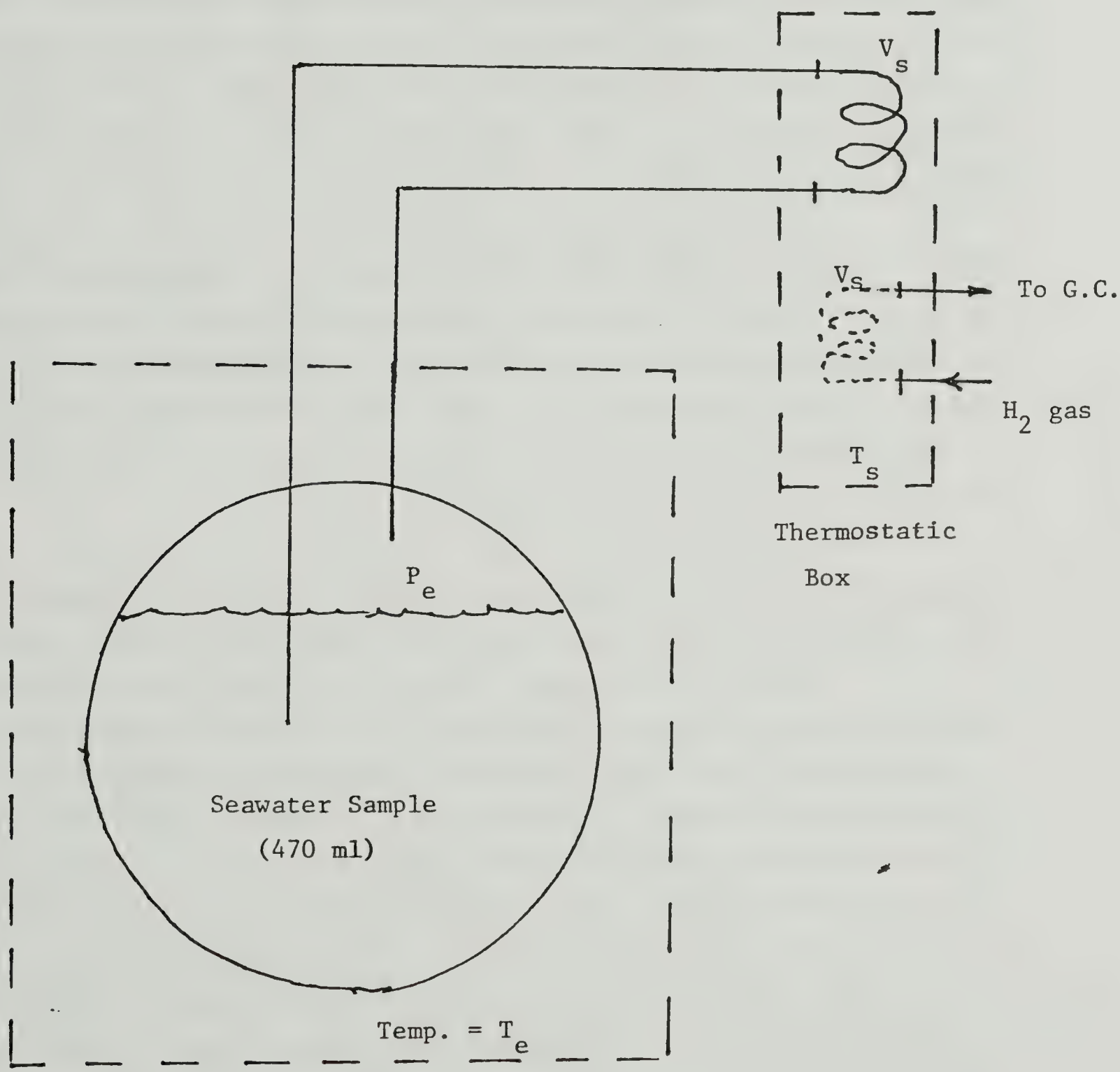
$$pCO_2 = (CO_2)\ (P_T - pH_2O),$$

where pH_2O is the partial pressure of water vapor in the sample before drying. Since pH_2O and P_T are not directly measured and are commonly inferred from the experimental condition,this procedure may introduce errors in the pCO_2 determination. Our new method is designed to measure pCO_2 directly by measuring the number of moles of CO_2 in a "wet" gas sample using a gas chromatograph. The principles for such measurement are briefly explained below.

Fig.2 shows a simplified view of the equilibrator and sampling loop in our system. The temperature of equilibrator is maintained at a constant temperature,T_e, and that of the sampling loop (including V_3 in Fig.1) is also kept constant at T_s. The volume of the sampling loop is V_s, and the same loop is used for sampling of the standard gases for calibration. After circulation of the carrier gas is stopped,the temperature of the gas in the sampling loop is equilibrated to T_s, and the total pressure of the gas is uniformly at P_e in the equilibrator. Since the mole fraction concentration of CO_2 and H_2O in the carrier gas is uniform in the system, and since the partial pressure is a product of the total pressure and the concentration (i.e. $p = P_e \cdot f$, where p is the partial pressure and f is the mole fraction concentration of CO_2 or H_2O), the pCO_2 in the carrier gas, p_s , should also be uniform throughout the system, although T_s is not equal to T_e.

On the other hand, the area under the chromatographic peak for CO_2 represents the number of CO_2 molecules in the sampling loop, and

Fig. 2 A simplified view of the equilibrator and sampling loop. Two positions of the gas sampling loop are shown: the solid line is used to indicate the equilibration mode, and the dotted line is used to indicate the G.C. analysis mode. The volume of loop is V_s. The thermostatic box surrounding the sampling loop corresponds to that surrounding V_3 shown in Fig.1.



gives the number of moles of CO_2 in the gas sample (which may contain water vapor) of volume V_s. Therefore, assuming the ideal gas law, we obtain the partial pressure of CO_2 in carrier gas, p_s, by:

$$p_s = n_s R\, T_s / V_s \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1),$$

where n_s is the number of moles of CO_2 in the sampling loop, R is the gas constant, and T_s and V_s are respectively the temperature and volume of the sampling loop. Note that neither the total gas pressure, P_e, nor pH_2O enter into the equation. The gas chromatograph is calibrated using two or more standard gas mixtures of known CO_2 mole fraction concentrations (based upon the gravimentric standards of Na_2CO_3 crystals) in dry air, the number of moles of CO_2 in the sampling loop can be expressed with a high precision in terms of a quadratic function of the chromatographic peak area, A, by:

$$n_s = (k_1 A + k_2 A^2) P_b V_s / R\, T_s \quad \ldots\ldots\ldots\ldots\ldots\ldots (2),$$

where P_b is the barometric pressure at which the chromatograph is calibrated, and k_1 and k_2 are the adjustable constants determined by curve fitting the CO_2 concentration vs peak area relation. P_b is determined using a recording barometer with a precision of $\pm$ 0.05%. For our instrument, the $k_2 A^2$ term is small compared to the $k_1 A$ term, and amounts to 1% or less of $k_1 A$. Substitution of Eq.2 into Eq.1 yields:

$$p_s = (k_1 A + k_2 A^2)\, P_b \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (3).$$

Becasue of the use of the same sampling loop for calibration gases and the sample gas, V_s and T_s are cancelled. This is our working equation.

Since it takes about 20 minutes to equilibrate a seawater sample with the carrier gas, and since p_s is uniform throughout the system, p_s measured at T_s after 20 minutes of equilibration should be equal to the pCO_2 of the water sample at temperature T_e. During the TTO test cruise, T_e was controlled at 20.0°C, and the pCO_2 values at this temperature are reported in this report. This equilibration temperature has been selected by the following reasons;(1) since the titrator determination of the alkalinity and total CO_2 concentration was performed at 25°C, and the titration data were processed using the 25°C values for K_1,K_2 and K_B, it is desirable to measure pCO_2 at a temperature close to 25°C; (2) to avoid condensation of water vapor in the tubings of the equilibrator system, the temperature of

circulating gas should be lower than the laboratory temperature, which has been kept above 20°C; and (3) since C.D. Keeling of Scripps is conducting his experiments at 20.0°C to elucidate the precise relationship between pCO_2 and total CO_2 cocnetration in seawater, the results of our shipboard study at this temperature can be directly compared with his without correcting the respective data for temperature difference.

The pCO_2 value thus measured using Eq.3 has to be corrected for a minor change in the total CO_2 concentration of the water sample, which resulted from the difference in the pCO_2 in water and that in the carrier gas used to initially fill the equilibrator system. The volume of the seawater sample, the volume,temperature and pressure of the initial carrier gas, and the diffrence between the initial pCO_2 value in the carrier gas and the final seawater pCO_2 value are needed to compute the amount of CO_2 transferred from or to the water sample during the equilibration process. Because of the large water volume/gas volume ratio in our system, this correction is small and amounts to less than 0.5% of the measured pCO_2 value. This correction has been applied to all the pCO_2 values reported here.

TABLE OF

THE TTO NORTH ATLANTIC CARBONATE CHEMISTRY DATA

The first nine columns represent the measured data obtained during the TTO Expedition,April - Oct.,1982[1], on board the R/V Knorr. The following six columns represent the computed values for testing the internal consistency among the alkalinity, total CO_2 concentration and pCO_2 data. The values for depth, in situ temperature, salinity,silica, and phosphate were obtained by the Physical-Chemical Oceanographic Data Facilities Group,Scripps Institution of Oceanography. The alkalinity and total CO_2 values were obtained by the Physical-Chemical Oceanographic Data Facilities Group in collaboration with Peter G.Brewer and Alvin Bradshaw of the Woods Hole Oceanographic Institution. The pCO_2 data obtained by the Lamont-Doherty Geological Observatory group are listed under GC PCO2 (the nineth column), and represent the values at 20.0°C and 1 atm. total pressure. These values are an average of two or more analyses performed on single samples, with an exception of a small number of samples which were analyzed only once. The samples, which were analyzed only once, are indicated by S at the end of the values. Whenever the difference between two analyses or the standard deviation of three or more analyses exceeded 0.5% of the mean value, the values are flagged with *.

PCO2 20C in the first column of CALCULATED QUANTITIES represents the calculated pCO_2 value at 20.0°C using the alkalinity and total CO_2 concentration values obtained by the titration method. DELPCO2 and DELPCO2/PCO2 represent the difference between the measured and calculated quantities in microatmosphere and % respectively. Similarly, TCO2 in the third column from the right indicates the calculated total CO_2 concentration using the measured alkalinity and pCO_2 values. DELTCO2 and DELTCO2/TCO2 represnt the differences between the measured and calculated values in uM/kg and % respectively. The mean of the differences at each station is listed at the end of each station listing.

The computer program (FORTRAN for VAX) used for the above computations is listed in the following pages.

```
C TT010.FOR TALK-TCO2-PCO2 CONSISTENCY TEST
      BYTE NAME(20),LAT(10),LON(10),TA(7),SA(7),PO4A(5)
      BYTE ZA(5),SIA(6),TALKA(6),TCO2A(6),AST,DATE(6)
      BYTE O2A(5),NO3A(5),NO2A(5),PRESSA(5),PCO2A(7)
      BYTE SYMBOL(8)
      INTEGER*4 IBOT,SAMP,Z,N(4)
      INTEGER*2 FLG(10),LEG
      REAL*8 FLGNOTE(9,9)
      REAL*4 CO2X(16),ST(3,4),SUM(4),SUMSQ(4)
      DATA ST/'DELP','CO2 ',' ',
     C        'DELP','CO2/','PCO2',
     C        'DELT','CO2 ',' ',
     C        'DELT','CO2/','TCO2'/
      DATA FLGNOTE/'* DELTA ','PCO2 > 0','.5 *    ',
     C 6*'          ',
     C              'S SINGLE',' ANALYSI','S       ',
     C 6*'          ',
     C              'T QUESTI','ONABLE D','UE TO TH',
     C  'ERMAL DI','SEQUILIB','RIUM    ',3*'          ',
     C              'M QUESTI','ONABLE D','UE TO MA',
     C  'CHINE MA','LFUNCTIO','N       ',3*'          ',
     C              'D ANALYZ','ED EARLI','ER OR LA',
     C  'TER THAN',' ADJACEN','T SAMPLE','S       ',
     C 2*'          ',
     C              'E SINGLE',' ANALYSI','S AND AN','ALYZED E',
     C  'ARLIER O','R LATER ','THAN ADJ','ACENT SA','MPLES    ',
     C              'F DELTA ','PCO2 > 0','.5 % AND',' ANALYZE',
     C  'D EARLIE','R OR LAT','ER THAN ','ADJACENT',' SAMPLES',
     C              'Z GC-PCO','2 AND TI','TRATION ','SAMPLES ',
     C  'FROM DIF','FERENT B','OTTLES B','UT SAME ','DEPTH    ',
     C  'J INTERP','OLATED V','ALUE    ',6*'          '/
      DATA SYMBOL/'*','S','T','M','D','E','F','Z'/
      TYPE 101
  101 FORMAT (' ENTER FILE')
      ACCEPT 102,NAME
  102 FORMAT (20A1)
      NAME(20)=0
      OPEN(UNIT=1,NAME=NAME,TYPE='OLD')
    1 CONTINUE
      DO 11 I=1,4
      SUM(I)=0.
      SUMSQ(I)=0.
      N(I)=0
   11 CONTINUE
      READ(1,201,END=9) LEG,NSTN,AST,LAT,LON,DATE,IBOT
  201 FORMAT (A2,A4,A1,10A1,2X,10A1,2X,6A1,2X,A4)
      TYPE 202,NSTN
  202 FORMAT (1X,A4)
C ASTERISK INDICATES CARBONATED STATION
      IF(AST.EQ.1H ) GOTO 8
    2 WRITE(6,300)
  300 FORMAT (1H1)
      WRITE(6,301)
  301 FORMAT (/////' TALK-TCO2-PCO2 CONSISTENCY TEST',10X,
     C '     FINAL DATA',10X,'VERSION 2 PCO2X AND TCO2X',
     C ' SUBROUTINES')
      WRITE(6,302)
  302 FORMAT ('OTTO',6X,'LEG   STN  LATITUDE   LONGITUDE',5X,'DATE',
     C '    BOTTOM')
      WRITE(6,303) LEG,NSTN,LAT,LON,DATE,IBOT
  303 FORMAT (10X,A2,3X,A4,1X,10A1,2X,10A1,1X,3(1X,2A1),2X,A4)
      WRITE(6,304)
  304 FORMAT (1H0,29X,'MEASURED QUANTITIES',18X,'*',15X,
     C 'CALCULATED QUANTITIES')
      WRITE (6,305)
  305 FORMAT (30X,20X,11X,'GC     *')
      WRITE(6,306)
  306 FORMAT (' SAMP  DEPTH  TEMP    SAL     TALK   TCO2   SIO3    ',
     C 'PO4      PCO2    *  PCO2  DELPCO2 DELPCO2  *  TCO2   ',
     C 'DELTCO2 DELTCO2')
      WRITE(6,307)
  307 FORMAT (8X,'(M)  INSITU  (0/00) (UEQ/KG)',3('(UM/KG)'),
     C '    20C     *  20C',12X,'/PCO2    *',18X,'/TCO2')
      WRITE(6,308)
  308 FORMAT (13X,'(DEGC)',40X,'(UATM)  * (UATM) (UATM)    (0/0)    *',
     C ' (UM/KG) (UM/KG)  (0/0)')
C CLEAR FOOTNOTE FLAGS
      DO 12 I=1,10
   12 FLG(I)=0
      DO 10 I=1,25
    3 READ(1,203,END=9) SAMP,ZA,TA,SA,O2A,PO4A,NO3A,CO2A,SIA,
```

```
      C PRESSA,TALKA,TCO2A,PCO2A
  203 FORMAT (1X,A4,1X,5A1,2(7A1),4(5A1),6A1,5A1,
     C 2(6A1),1X,7A1)
C TEST FOR END OF STATION
      IF(SAMP.EQ.4H      ) GOTO 33
C TEST FOR NO CARBONATE DATA
      IF(TALKA(4).EQ.1H  .AND. TCO2A(4).EQ.1H   .AND.
     C PCO2A(4).EQ.1H ) GOTO 3
C TEST FOR PARTIAL CARBONATE DATA (NO CALCULATIONS)
      IF(TALKA(1).EQ.1H .OR. TCO2A(4).EQ.1H ) GOTO 15
C TEST FOR MISSING DATA (NO CALCULATIONS)
      IF(ZA(4).EQ.1H .OR. TA(3).EQ.1H .OR. SA(3).EQ.1H
     C .OR. PO4A(4).EQ.1H .OR.SIA(4).EQ.1H ) GOTO 15
C TEST FOR INTERPOLATED VALUES
   22 IF(TA(7).EQ.1HI .OR.SA(7).EQ.1HI .OR. SIA(6).EQ.1HI
     C .OR. PO4A(5).EQ.1HI) FLG(9)=1
C TEST FOR NO POSSIBILITY OF FOOTNOTES
      IF(PCO2A(7).EQ.1H ) GOTO 14
      DO 13 J=1,8
      IF(PCO2A(7).EQ.SYMBOL(J)) FLG(J)=1
      IF(PCO2A(7).EQ.SYMBOL(J)) GOTO 14
   13 CONTINUE
   14 CONTINUE
C DECODE DATA INTO NUMERIC VALUES
    5 DECODE(4,501,ZA) Z
  501 FORMAT (I4)
      DECODE(6,502,TA) T
  502 FORMAT (F6.3)
      DECODE(6,502,SA) S
      DECODE(4,503,PO4A)PO4
  503 FORMAT (F4.2)
      DECODE(5,504,SIA) SIL
  504 FORMAT (F5.1)
      DECODE(5,505,TALKA) TALK
      DECODE(5,505,TCO2A) TCO2
  505 FORMAT (F5.0)
      PO4=PO4*1.E-6
      SIL=SIL*1.E-6
      TALK=TALK*1.E-6
      TCO2=TCO2*1.E-6
      CALL PCO2X(0,20.,S,PO4,SIL,TALK,TCO2,CO2X)
C TEST FOR MISSING GC DATA (PARTIAL CALCULATION IS PERFORMED)
      IF(PCO2A(4).EQ.1H ) GOTO 16
      DECODE(6,506,PCO2A) PCO2
  506 FORMAT (F6.1)
      PCO2=PCO2*1.E-6
      CALL TCO2X(0,20.,S,PO4,SIL,TALK,PCO2,TCO2C)
      DPCO2=PCO2-CO2X(1)
      DPCO2P=DPCO2*100./PCO2
      DTCO2=TCO2-TCO2C
      DTCO2P=DTCO2*100./TCO2
      DPCO2=DPCO2*1.E+6
      DTCO2=DTCO2*1.E+6
      CO2X(1)=CO2X(1)*1.E+6
      TCO2C=TCO2C*1.E+6
      CALL STAT(DPCO2,SUM(1),SUMSQ(1),N(1))
      CALL STAT(DPCO2P,SUM(2),SUMSQ(2),N(2))
      CALL STAT(DTCO2,SUM(3),SUMSQ(3),N(3))
      CALL STAT(DTCO2P,SUM(4),SUMSQ(4),N(4))
      WRITE(6,205) SAMP,ZA,TA,SA,TALKA,TCO2A,SIA,PO4A,PCO2A
     C ,CO2X(1),DPCO2,DPCO2P,TCO2C,DTCO2,DTCO2P
  205 FORMAT (1H0,A4,2X,5A1,1X,7A1,1X,7A1,2X,6A1,1X,6A1,
     C 6A1,2A,5A1,3X,7A1,' *',2F7.1,F8.2,'   *',F7.1,
     C F8.1,F8.2)
      GOTO 10
   16 CO2X(1)=CO2X(1)*1.E+6
      WRITE(6,205) SAMP,ZA,TA,SA,TALKA,TCO2A,SIA,PO4A,PCO2A,
     C CO2X(1)
      GOTO 10
   15 WRITE(6,205) SAMP,ZA,TA,SA,TALKA,TCO2A,SIA,PO4A,PCO2A
   10 CONTINUE
      GOTO 34
C SET END OF STATION FLAG
   33 FLG(10)=1
    4 WRITE(6,601)
  601 FORMAT (1H0,8X,'STATION STATISTICS')
      WRITE(6,602)
  602 FORMAT (1H0,15X,'N      MEAN    SIGMA')
      DO 17 I=1,4
      IF(N(I).EQ.0) GOTO 17
```

```
      IF(N(I).EQ.1) GOTO 17
      SUMSQ(I)=SQRT(SUMSQ(I)/N(I)-SUM(I)*SUM(I))
   17 WRITE(6,603)(ST(J,I),J=1,3),N(I),SUM(I),SUMSQ(I)
  603 FORMAT (1H0,3A4,I4,F8.1,F8.2)
   34 DO 18 I=1,9
   18 IF(FLG(I).EQ.1) WRITE(6,309)(FLGNOTE(J,I),J=1,9)
  309 FORMAT (1H0,59X,9A8)
C TEST FOR END OF STATION
      IF(FLG(10).EQ.1) GOTO 1
      GOTO 2
C BYPASS NON-CARBONATED STATIONS
    8 READ(1,203) SAMP
      IF(SAMP.EQ.4H      ) GOTO 1
      GOTO 8
    9 STOP
      END
      SUBROUTINE STAT(X,SUMX,SUMXX,N)
      SUMX=SUMX+X
      SUMXX=SUMXX+X*X
      N=N+1
      RETURN
      END
```

```
      SUBROUTINE PCO2X(Z,T,S,TP,TS1,TALK,TCO2,CO2X)
      IMPLICIT REAL  (K)
      INTEGER Z
      DIMENSION CO2X(16)
      DATA BAS10/2.302585/
      TK=T+273.15
      TK1=TK/100.
      K1=EXP(BAS10*(13.7201-3.1334E-2*TK-3235.76/TK-1.3E-5*S*TK
     C +0.1032*SQRT(S)))
      K2=EXP(BAS10*(-5371.9645-1.671221*TK-0.22913*S-18.3802*ALOG10(S)
     C +128375.28/TK+2194.3055*ALOG10(TK)+8.0944E-4*S*TK
     C +5617.11*ALOG10(S)/TK-2.136*S/TK))
      KB=EXP(BAS10*(-9.26+0.00886*S+0.01*T))
      IF(Z.EQ.0) GOTO 60
      P=1.0+Z*0.1027/1.020
      CP=(P-1.)/(TK*83.143)
      K1=K1*EXP((24.2-0.085*T)*CP)
      K2=K2*EXP((16.4-0.040*T)*CP)
      KB=KB*EXP((27.5-0.095*T)*CP)
   60 CONTINUE
      BS=0.023517+(-0.023656+0.0047036*TK1)*TK1
      ALPHS=EXP(-60.2409+93.4517/TK1+23.3585*ALOG(TK1)+S*BS)
      KP2=EXP(-9.039-1450./TK)
      KP3=EXP(4.466-7276./TK)
      KW0=EXP(148.9802-13847.26/TK-23.6521*ALOG(TK))
      KWSW=KW0*EXP((12.0408*ALOG(TK)+3298.72/TK-79.2447)*SQRT(S)
     C -1.9813E-2*S)
      FH=1.2948-2.036E-3*TK+S*S*(4.607E-4-1.475E-6*TK)
      KSI=4.0E-10
      TB=4.106E-4*S/35.
      A1=KB*TB
      A2=KSI*TSI
      A3=KP2*KP3
      A4=KWSW*FH
      C1=K1/2.
      C2=1.-4.*K2/K1
      AH1=1.E-8
      DO 10 I=1,50
      AB=A1/(AH1+KB)
      AS1=A2/(AH1+KSI)
      B1=KP2/AH1
      B2=KP3/AH1
      AP=TP*(1.+2.*B1+3.*B1*B2)/(1.+B1+B1*B2)
      AW=A4/AH1-AH1/FH
      AC=TALK-AB-AS1-AP-AW
      C3=AC/TCO2
      AH2=C1/C3*(1.-C3+SQRT(1.+C2*C3*(C3-2.)))
      IF(ABS(1.-AH1/AH2).LE.3.16E-5) GOTO 15
      AH1=AH2
   10 CONTINUE
   15 CONTINUE
      CO2X(4)=TCO2/(1.+K1/AH2+K1*K2/(AH2*AH2))
      CO2X(1)=CO2X(4)/ALPHS
      CO2X(3)=TCO2/(1.+AH2/K1+K2/AH2)
      CO2X(2)=K2*CO2X(3)/AH2
      CO2X(5)=AH2
      CO2X(6)=-ALOG(AH2)/BAS10
      CA=1.026E-2*S/35.
      CO2X(7)=CA*CO2X(2)
      CO2X(8)=KB
      CO2X(9)=K1
      CO2X(10)=K2
      CV=EXP((36.0-0.2*T)*CP)
      KCALP1=(-34.452-39.866*S**(1./3.)+110.21*ALOG10(S)
     C -7.5752E-6*TK*TK)*1.E-7
      KCALPT=KCALP1*CV
      CO3CAL=KCALPT/CA
      CO2X(11)=KCALP1
      CO2X(12)=KCALPT
      CO2X(13)=CO3CAL
      DV=EXP((33.3-0.22*T)*CP)
      KARGP1=1.45*KCALP1
      KARGPT=KARGP1*DV
      CO3ARG=KARGPT/CA
      CO2X(14)=KARGP1
      CO2X(15)=KARGPT
      CO2X(16)=CO3ARG
      RETURN
      END
```

FH

```
      SUBROUTINE PCO2X(Z,T,S,TP,TSI,TALK,PCO2,TCO2)
      IMPLICIT REAL  (K)
      INTEGER Z
      DATA BASIO/2.302585/
      TK=T+273.15
      TK1=TK/100.
      K1=EXP(BASIO*(13.7201-3.1334E-2*TK-3235.76/TK-1.3E-5*S*TK
     C +0.1032*SQRT(S)))
      K2=EXP(BASIO*(-5371.9645-1.671221*TK-0.22913*S-18.3802*ALOG10(S)
     C +128375.28/TK+2194.3055*ALOG10(TK)+8.0944E-4*S*TK
     C +5617.11*ALOG10(S)/TK-2.136*S/TK))
      KB=EXP(BASIO*(-9.26+0.00886*S+0.01*T))
      IF(Z.EQ.0) GOTO 60
      P=1.0+Z*0.102771.020
      CP=(P-1.)/(TK*83.143)
      K1=K1*EXP((24.2-0.085*T)*CP)
      K2=K2*EXP((16.4-0.040*T)*CP)
      KB=KB*EXP((27.5-0.095*T)*CP)
   60 CONTINUE
      BS=0.023517+(-0.02365640.0047036*TK1)*TK1
      ALPHS=EXP(-60.2409+93.4517/TK1+23.3585*ALOG(TK1)+S*BS)
      KP2=EXP(-9.039-1450./TK)
      KP3=EXP(4.466-7276./TK)
      KW0=EXP(148.9802-13847.26/TK-23.6521*ALOG(TK))
      KWSP=KW0*EXP((12.0408*ALOG(TK)+3298.72/TK-79.2447)*SQRT(S)
     C -1.9813E-2*S)
      FH=1.2948-2.036E-3*TK+S*S*(4.607E-4-1.475E-6*TK)
      KSI=4.0E-10
      TB=4.106E-4*S/35.
      A1=KB*TB
      A2=KSI*TSI
      A4=KWSP*FH
      C1=ALPHS*PCO2*K1/2.
      C2=4.*K2/C1
      AH1=1.E-8
      DO 10 I=1,50
      AB=A1/(AH1+KB)
      ASI=A2/(AH1+KSI)
      B1=KP2/AH1
      B2=KP3/AH1
      AP=TP*(1.+2.*B1+3.*B1*B2)/(1.+B1+B1*B2)
      AW=A4/AH1-AH1/FH
      AC=TALK-AB-ASI-AP-AW
      AH2=C1/AC*(1.+SQRT(1.+C2*AC))
      IF(ABS(1.-AH1/AH2).LE.3.16E-5) GOTO 15
      AH1=AH2
   10 CONTINUE
      TYPE 101
  101 FORMAT (' NO CONVERGENCE')
   15 CONTINUE
      TCO2=ALPHS*PCO2*(1.+K1/AH2+K1*K2/(AH2*AH2))
      RETURN
      END
```

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITD	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	1	39 48.2 N	70 5.0 W	2 4 81	

			MEASURED QUANTITIES						*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
227	10	11.277	35.199	2333.	2089.	5.3	0.61	469.7	*	455.6	14.1	3.00	*	2094.8	-5.8	-0.28
228	55	11.222	35.185	2335.	2091.	5.4	0.63	473.6	*	456.3	17.3	3.66	*	2098.1	-7.1	-0.34
229	155	12.652	35.657	2360.	2109.	5.4	0.70	455.6	*	455.0	0.6	0.13	*	2109.2	-0.2	-0.01
230	306	8.544	35.132	2331.	2181.	14.6	1.49	824.2	*	784.6	39.6	4.80	*	2188.8	-7.8	-0.36
232	704	4.738	34.969			12.6	1.23	770.3	*							
233	803	4.586	34.963	2312.	2152.	12.5	1.22	758.9*	*	721.7	37.2	4.90	*	2160.1	-8.1	-0.38
234	951	4.402	34.958	2321.	2154.	12.4	1.20	793.4	*	696.3	97.1	12.24	*	2175.1	-21.1	-0.98
235	1048	4.318	34.961	2318.	2151.	12.5	1.19	759.6	*	694.3	65.3	8.60	*	2165.6	-14.6	-0.68
236	1160	4.177	34.965	2321.	2152.	12.5	1.18	734.4	*	687.7	46.7	6.35	*	2162.8	-10.8	-0.50

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	8	39.7	28.92
DELPCO2/PCO2	8	5.5	3.45
DELTCO2	8	-9.4	5.83
DELTCO2/TCO2	8	-0.4	0.27

* DELTA PCO2 > 0.5 *

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIC	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	3	38 16.6 N	69 9.6 W	3 4 81	3700

				MEASURED QUANTITIES					*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
427	3	13.719	35.510					420.6	*							
101	12	13.667	35.723	2357.	2095.	5.4	0.60	436.2	*	429.7	6.5	1.49	*	2098.0	-3.0	-0.14
428	12	13.818	35.770					420.9	*							
429	32	13.785	35.784					442.9	*							
430	34	13.715	35.781					459.7	*							
431	36	13.116	35.723					433.5	*							
432	38	12.805	35.676					439.4	*							
433	40	12.699	35.664		2101			446.3	*							
102	43	12.989	35.693	2341.	2096.	5.1	0.58	439.1	*	462.2	-23.1	-5.26	*	2086.0	10.0	0.48
434	53	12.354	35.626					460.8	*							
103	94	12.194	35.630	2349.	2108.	5.9	0.72	486.4	*	474.7	11.7	2.40	*	2112.6	-4.6	-0.22
104	145	11.632	35.580	2331.	2121.	6.0	0.82	515.1	*	552.4	-37.3	-7.25	*	2108.2	12.8	0.60
435	149	11.680	35.549					507.7	*							
105	195	10.635	35.419			10.2	1.15	641.4	*							
436	246	9.135	35.206					812.5	*							
106	294	8.548	35.162	2313.	2185.	15.5	1.53	829.6	*	893.9	-64.3	-7.75	*	2173.5	11.5	0.53
107	393	7.094	35.073			15.3	1.49	833.0	*							
108	492	5.555	35.017	2305.	2170.	13.9	1.33	794.0	*	843.9	-49.9	-6.29	*	2160.5	9.5	0.44
109	594	5.023	35.002			13.2	1.27	771.2	*							
110	694	4.686	34.994	2303.	2160.	12.8	1.23	760.6	*	799.1	-38.5	-5.06	*	2152.2	7.8	0.36
111	793	4.538	34.9840			12.6	1.20	754.5	*							
112	893	4.432	34.990	2303.	2158.	12.6	1.19	745.3	*	788.6	-43.3	-5.81	*	2149.0	9.0	0.42
113	993	4.252	34.978			12.5	1.18	743.2	*							
114	1092	4.253	34.986	2302.	2157.	12.6	1.18	732.5	*	788.0	-55.5	-7.58	*	2145.4	11.6	0.54
115	1193	4.134	34.974			12.5	1.17	737.1	*							

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	3	38 16.6 N	69 9.6 W	3 4 81	3700

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
116	1292	4.037	34.968	2298.	2155.	12.5	1.19	732.4	795.3	-62.9	-8.58	2141.9	13.1	0.61
117	1389	4.048	34.978			12.9	1.19	730.5						
241	1484	3.964H	34.977	2300.	2147.	13.3	1.19		748.0					
118	1489	3.995	34.979	2301.	2154.	13.2	1.19	725.8	777.3	-51.5	-7.10	2143.1	10.9	0.51
119	1587	3.890	34.978			13.7	1.18	725.3						
120	1670	3.781	34.978	2303.	2152.	14.3	1.19	724.9*	758.7	-33.8	-4.66	2144.7	7.3	0.34
121	1768	3.643	34.976			15.1	1.19	724.3						
243	1901	3.475H	34.969	2308.	2154.	16.3	1.21		748.3					
122	1964	3.372	34.967	2307.	2154.	17.2	1.20	723.0	752.0	-29.0	-4.01	2147.7	6.3	0.29
123	2316	3.000	34.948			18.9	1.19	723.9						
242	2430	2.957H	34.944	2319.	2156.	19.4	1.20		712.6					
124	2468	2.883	34.941	2304.	2153.	19.2	1.18		759.8					
244	2953	2.492H	34.921	2308.	2154.	20.5	1.16		747.1					
128	2984	2.474	34.921	2310.	2154.	21.8	1.17	724.1	739.2	-15.1	-2.08	2150.7	3.3	0.15
246	3216	2.317H	34.909	2319.	2161.	24.3	1.20		735.4					
130	3344	2.281	34.907	2308.	2157.	24.1	1.18	732.9	762.1	-29.2	-3.98	2150.7	6.3	0.29
247	3372	2.242H	34.903	2319.	2164.	26.3	1.22		749.3					
248	3530	2.190H	34.898	2329.	2162.	29.5	1.25		701.9					
132	3560	2.201	34.898	2315.	2165.	29.5	1.25	741.7	771.6	-29.9	-4.04	2158.6	6.4	0.29
134	3655	2.161	34.894	2320.	2169.	33.2	1.29	740.8	770.4	-29.6	-4.00	2162.7	6.3	0.29
249	3687	2.155H	34.891	2326.	2174.	33.8	1.31		768.6					
136	3694	2.155	34.892	2315.	2166.	33.9	1.30	745.2	777.7	-32.5	-4.36	2159.2	6.8	0.32

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	18	-33.7	19.98
DELPCO2/PCO2	18	-4.7	2.85
DELTCO2	18	7.3	4.69
DELTCO2/TCO2	18	0.3	0.22

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	5	35 59.7 N	68 0.0 W	5 4 81	

			MEASURED QUANTITIES						CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP IN SITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
127	7	21.175	36.430					268.2*						
201	10	21.038	36.441	2374.	2021.	0.9	0.05	270.0	287.9	-17.9	-6.62	2006.5	14.5	0.72
128	23	21.192	36.428					268.0						
129	39	21.179	36.430					266.3S						
130	40	21.071	36.442					269.3						
202	43	20.561	36.502	2404.	2038.	1.1	0.06		279.6					
131	43	21.056	36.449					268.2						
132	44	21.021	36.452					272.0						
133	46	20.847	36.476					275.0						
134	60	20.233	36.508					282.8						
203	90	19.336	36.574	2384.	2050.	1.4	0.09	308.6	317.4	-8.8	-2.84	2043.8	6.2	0.30
135	147	18.769	36.573					312.2						
204	190	18.523	36.556	2378.	2076.	1.7	0.16		366.2					
136	245	18.327	36.554					324.9						
205	289	18.260	36.562	2383.	2060.	1.5	0.12	319.0	333.4	-14.4	-4.51	2050.3	9.7	0.47
206	389	18.194	36.556	2378.	2062.	1.5	0.12		342.9					
207	489	17.666	36.449	2378.	2077.	2.2	0.27	361.8*	367.3	-5.5	-1.51	2073.8	3.2	0.15
209	694	15.233	36.034	2351.	2119.	4.8	0.69	487.9	503.4	-15.5	-3.17	2113.1	5.9	0.28
210	791	13.242	35.720	2339.	2146.	7.9	1.02		615.0					
211	890	11.619	35.481	2328.	2161.	11.0	1.28	698.4	708.9	-10.5	-1.50	2158.5	2.5	0.11
212	989	8.911	35.167	2315.	2180.	16.0	1.56		855.4					
213	1086	7.155	35.089	2311.	2172.	15.2	1.49	830.1	829.1	1.0	0.12	2172.2	-0.2	-0.01
214	1180	5.848	35.043	2307.	2166.	14.1	1.35		813.9					
215	1275	5.186	35.013	2306.	2155.	13.3	1.27	768.6	761.9	6.7	0.87	2156.4	-1.4	-0.06
216	1369	4.819	35.008	2304.	2160.	12.8	1.23		794.4					

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	5	35 59.7 N	68 0.0 W	5 4 81	

	MEASURED QUANTITIES								*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
217	1481	4.571	34.999	2305.	2147.	12.5	1.20	745.0	*	727.8	17.2	2.30	*	2150.8	-3.8	-0.17
218	1578	4.390	34.984D	2301.	2154.	12.3	1.18		*	777.1						
219	1678	4.189	34.974	2302.	2144.	12.2	1.17	732.0	*	725.4	6.6	0.91	*	2145.5	-1.5	-0.07
220	1783	4.087	34.972	2295.	2148.	12.4	1.16		*	773.3						
221	1881	4.024	34.973	2301.	2143.	12.6	1.16	703.8	*	725.3	-21.5	-3.06	*	2138.1	4.9	0.23
222	1981	3.950	34.971	2302.	2147.	12.9	1.16		*	739.5						
223	2233	3.825	34.976	2304.	2143.	14.0	1.15	715.6	*	713.1	2.5	0.34	*	2143.6	-0.6	-0.03
224	2480	3.578	34.967	2307.	2151.	15.2	1.16		*	737.4						
227	2737	3.381	34.962	2310.	2144.	17.1	1.17	720.3	*	695.4	24.9	3.46	*	2149.8	-5.8	-0.27
228	2982	3.110	34.951	2315.	2149.	19.3	1.18	718.2	*	697.9	20.3	2.82	*	2153.7	-4.7	-0.22
229	3230	2.844	34.937	2320.	2153.	21.1	1.17	716.3	*	696.5	19.8	2.76	*	2157.6	-4.6	-0.21
230	3477	2.663	34.926	2315.	2153.	23.0	1.17	716.4	*	715.4	1.0	0.14	*	2153.2	-0.2	-0.01
231	3713	2.494	34.915	2315.	2150.	24.1	1.17	722.9	*	702.3	20.6	2.86	*	2154.7	-4.7	-0.22
232	3958	2.361	34.906	2321.	2159.	26.3	1.18	724.9	*	718.3	6.6	0.91	*	2160.5	-1.5	-0.07
233	4207	2.320	34.899	2320.	2158.	29.9	1.22	735.3	*	718.2	17.1	2.32	*	2161.8	-3.8	-0.18
234	4453	2.293	34.895	2333.	2175.	32.2	1.24	735.2	*	743.4	-8.2	-1.11	*	2173.2	1.8	0.08
235	4651	2.286	34.895	2325.	2168.	34.1	1.27	732.3	*	744.3	-12.0	-1.64	*	2165.4	2.6	0.12
236	4870	2.285	34.887	2324.	2169.	36.0	1.30	743.0	*	753.7	-10.7	-1.44	*	2166.7	2.3	0.11

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	0.9	14.02
DELPCO2/PCO2	22	-0.3	2.60
DELTCO2	22	1.0	4.99
DELTCO2/TCO2	22	0.0	0.24

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	6	34 41.0 N	67 20.7 W	5 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
341	4	21.773H	36.384	2374.	2018.	0.7	0.03		283.5					
427	8	21.509	36.420					271.9						
201	11	21.784	36.385	2372.	2015.	0.7	0.02	268.4	281.7	-13.3	-4.94	2004.1	10.9	0.54
428	43	21.514	36.420					274.0						
202	47	21.785	36.384	2368.	2022.	0.7	0.03	257.6	294.8	-37.2	-14.45	1991.5	30.5	1.51
429	47	21.504	36.421					271.9						
430	48	20.346	36.461					295.0						
431	50	20.348	36.471					296.4						
432	52	20.314	36.511					297.5						
433	54	20.268	36.544					307.3						
434	64	19.688	36.584					325.8						
342	103	18.557H	36.471	2379.	2054.	1.4	0.09		328.4					
203	142	17.822	36.484	2376.	2061.	1.6	0.14		343.3					
435	150	18.520	36.562					328.3						
343	203	17.599H	36.500	2383.	2061.	1.7	0.16		334.5					
436	248	17.654	36.502					334.4						
204	291	17.535	36.483	2375.	2071.	1.8	0.16	319.8	361.2	-41.4	-12.94	2044.7	26.3	1.27
205	394	17.434	36.466	2378.	2066.	1.8	0.19		348.6					
344	500	17.271H	36.430	2379.	2079.	2.0	0.21		369.1					
206	588	15.046	36.015	2347.	2118.	4.7	0.66	472.8	509.6	-36.8	-7.78	2103.7	14.3	0.67
207	681	13.089	35.691	2336.	2139.	7.6	1.00		599.7					
345	747	11.318H	35.452	2329.	2154.	10.9	1.24		675.4					
208	784	10.417	35.332	2317.	2169.	13.1	1.42	756.7	789.6	-32.9	-4.35	2162.2	6.8	0.31
209	883	8.285	35.138	2317.	2177.	15.5	1.54		828.5					
210	981	6.404	35.056	2307.	2173.	14.6	1.42	806.3	852.7	-46.4	-5.75	2164.3	8.7	0.40

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	6	34 41.0 N	67 20.7 W	5 4 81	

	MEASURED QUANTITIES								*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
211	1081	5.768	35.066	2312.	2162.	14.1	1.35		*	771.5					
212	1178	5.208	35.042	2310.	2164.	13.1	1.28	756.9	*	789.2	-32.3	-4.26	2157.4	6.6	0.31
347	1243	4.778H	35.008	2311.	2149.	12.8	1.22		*	713.3					
213	1273	4.721	35.005	2306.	2152.	12.8	1.24		*	747.5					
214	1366	4.549	34.995	2303.	2156.	12.6	1.21	737.0	*	778.8	-41.8	-5.67	2147.2	8.8	0.41
215	1467	4.354	34.994	2313.	2152.	12.5	1.20		*	718.7					
216	1566	4.181	34.984	2313.	2162.	12.6	1.20	731.9	*	764.3	-32.4	-4.43	2155.0	7.0	0.32
217	1666	4.031	34.973	2303.	2141.	12.8	1.19		*	708.9					
218	1860	3.916	34.975	2302.	2151.	13.5	1.19	723.0	*	758.6	-35.6	-4.92	2143.3	7.7	0.36
219	2061	3.784	34.980	2307.	2146.	14.7	1.20		*	715.6					
142	2199	3.659H	34.979	2309.	2153.	15.6	1.21		*	739.3					
220	2260	3.605	34.975	2309.	2156.	16.0	1.21	711.5	*	753.3	-41.8	-5.88	2146.8	9.2	0.43
143	2442	3.405H	34.969	2309.	2148.	17.4	1.20		*	717.1					
221	2461	3.408	34.967	2311.	2147.	17.6	1.21		*	704.7					
222	2664	3.257	34.959	2310.	2156.	19.2	1.22	717.8	*	749.0	-31.2	-4.34	2149.1	6.9	0.32
223	2868	3.067	34.950	2313.	2148.	20.2	1.22		*	701.6					
144	2921	3.002H	34.946	2315.	2161.	20.4	1.21		*	751.4					
224	3218	2.769	34.933	2312.	2149.	22.0	1.22	720.9	*	709.7	11.2	1.55	2151.5	-2.5	-0.12
145	3403	2.611H	34.923	2315.	2155.	23.5	1.21		*	724.2					
228	3770	2.419	34.909	2313.	2164.	26.6	1.24	722.4	*	775.3	-52.9	-7.32	2152.6	11.4	0.53
146	3885	2.379H	34.906	2314.	2165.	27.8	1.24		*	775.5					
230	4216	2.317	34.900	2319.	2167.	30.5	1.28	728.0	*	764.6	-36.6	-5.02	2159.1	7.9	0.37
147	4364	2.316H	34.897	2322.	2163.	31.3	1.27		*	733.3					
232	4756	2.300	34.890	2328.	2174.	34.4	1.32	743.7	*	760.9	-17.2	-2.31	2170.3	3.7	0.17
234	5047	2.288	34.884	2323.	2174.	37.8	1.36	744.0	*	782.2	-38.2	-5.13	2166.0	8.0	0.37

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	6	34 41.0 N	67 20.7 W	5 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
236	5093	2.276	34.882	2327.	2178.	39.2	1.38	751.5	784.8	-33.3	-4.43	2171.0	7.0	0.32
148	5203	2.242H	34.875	2333.	2187.	43.4	1.41		804.5					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	18	-32.8	13.89
DELPCO2/PCO2	18	-5.7	3.42
DELTCO2	18	9.9	7.34
DELTCO2/TCO2	18	0.5	0.36

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	7	31 40.0 N	68 29.7 W	7 4 81	

			MEASURED QUANTITIES					*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP IUSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
441	5	18.351H	36.567	2378.	2047.	1.2	0.02		*	319.9					
127	8	18.476	36.561					294.1	*						
301	12	18.389	36.566			1.5	0.03	304.7	*						
128	33	18.475	36.564					297.7	*						
129	36	18.474	36.560					293.7	*						
130	37	18.468	36.560					297.7	*						
131	39	18.321	36.559					298.1	*						
132	41	18.403	36.559					300.4	*						
133	43	18.166	36.554					310.3	*						
302	45	18.340	36.563	2382.	2055.	1.5	0.04	306.3	*	327.1	-20.8	-6.78	* 2040.5	14.5	0.70
134	61	18.069	36.554					323.1	*						
135	149	18.044	36.552					319.7	*						
303	149	18.064	36.553	2382.	2060.	1.6	0.12	323.7	*	334.5	-10.8	-3.34	* 2052.8	7.2	0.35
443	203	18.055H	36.552	2381.	2063.	1.3	0.11		*	340.6					
136	246	17.983	36.542					327.3	*						
304	290	18.037	36.547	2379.	2066.	1.6	0.13	325.1	*	347.9	-22.8	-7.01	* 2051.3	14.7	0.71
305	437	17.483	36.432	2370.	2081.	2.0	0.28	365.7*	*	386.2	-20.5	-5.61	* 2069.6	11.4	0.55
444	447	17.249H	36.390	2366.	2095.	2.3	0.31		*	419.7					
306	489	17.030	36.356	2368.	2094.	2.6	0.38	394.0	*	414.4	-20.4	-5.17	* 2083.7	10.3	0.49
445	571	15.376H	36.065	2349.	2115.	4.4	0.64		*	497.3					
307	632	14.438	35.911		2146.	5.7	0.79	517.2	*						
308	681	13.301	35.732	2337.	2141.	7.1	0.95	569.0	*	603.4	-34.4	-6.05	* 2130.5	10.5	0.49
446	744	11.665H	35.495	2328.	2157.	9.9	1.16		*	691.6					
309	780	10.881	35.398	2321.	2156.	11.6	1.32	713.6	*	712.8	0.8	0.12	* 2156.2	-0.2	-0.01
310	830	9.779	35.253	2325.	2176.	14.1	1.49	792.2	*	788.0	4.2	0.53	* 2176.8	-0.8	-0.04

* DELTA PCO2 > 0.5 *

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	7	31 40.0 N	68 29.7 W	7 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
311	878	8.893	35.195	2315.	2168.	14.6	1.50	808.9	*	791.5	17.4	2.15	*	2171.4	-3.4	-0.16
447	988	6.692H	35.084	2311.	2168.	14.8	1.40		*	807.3						
312	1080	6.047	35.075	2311.	2168.	14.2	1.38	794.7	*	806.6	-11.9	-1.50	*	2165.7	2.3	0.11
313	1181	5.428	35.067	2310.	2157.	13.5	1.30	761.9	*	756.0	5.9	0.77	*	2158.2	-1.2	-0.06
448	1235	5.056H	35.054	2306.	2155.	13.1	1.23		*	762.4						
314	1271	5.021	35.051	2309.	2159.	13.1	1.25	749.4	*	768.6	-19.2	-2.56	*	2155.0	4.0	0.19
315	1368	4.779	35.043			13.0	1.23	737.2	*							
241	1784	4.057H	35.012	2310.	2149.	14.5	1.18	721.6	*	717.5	4.1	0.57	*	2149.9	-0.9	-0.04
316	1840	3.944	35.003	2308.	2153.	14.8	1.21	722.5	*	743.9	-21.4	-2.97	*	2148.3	4.7	0.22
242	2029	3.720H	34.994	2304.	2159.	16.2	1.18	716.9	*	789.5	-72.6	-10.13	*	2143.6	15.4	0.71
317	2080	3.719	34.994	2304.	2148.	16.4	1.24	754.7*	*	737.4	17.3	2.30	*	2151.7	-3.7	-0.17
243	2277	3.425H	34.975	2306.	2147.	18.5	1.20	718.3	*	724.5	-6.2	-0.87	*	2145.6	1.4	0.07
318	2321	3.411	34.973	2309.	2158.	18.5	1.24	717.3	*	763.5	-46.2	-6.44	*	2147.9	10.1	0.47
244	2522	3.183H	34.961	2311.	2160.	20.4	1.21	718.1	*	763.7	-45.6	-6.36	*	2150.1	9.9	0.46
319	2705	3.038	34.950	2312.	2155.	21.1	1.25	745.8	*	736.8	9.0	1.21	*	2157.0	-2.0	-0.09
245	3013	2.759H	34.934	2316.	2154.	22.6	1.20	717.8*	*	716.0	1.8	0.25	*	2154.4	-0.4	-0.02
320	3215	2.642	34.930	2310.	2159.	23.4	1.24	718.1	*	763.8	-45.7	-6.36	*	2149.1	9.9	0.46
246	3505	2.458H	34.915	2310.	2157.	25.5	1.20		*	753.9						
321	3718	2.402	34.909	2315.	2158.	26.8	1.25	733.8	*	738.7	-4.9	-0.67	*	2156.9	1.1	0.05
247	3995	2.343H	34.903	2315.	2157.	29.2	1.24	729.0	*	734.0	-5.0	-0.69	*	2155.9	1.1	0.05
322	4220	2.314	34.898		2167.	30.5	1.28	731.2	*							
248	4485	2.295H	34.895	2323.	2175.	32.9	1.28	738.6	*	786.0	-47.4	-6.42	*	2165.0	10.0	0.46
323	4713	2.295	34.891	2322.	2168.	34.2	1.33	743.6	*	757.2	-13.6	-1.84	*	2165.1	2.9	0.14
324	4957	2.269	34.883	2334.	2173.	38.4	1.37	751.0	*	732.4	18.6	2.47	*	2177.1	-4.1	-0.19
249	5108	2.185H	34.870	2333.	2179.	46.5	1.43	764.8	*	765.5	-0.7	-0.09	*	2178.9	0.1	0.01

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	7	31 40.0 N	68 29.7 W	7 4 81	

			MEASURED QUANTITIES					*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	28	-14.0	22.20
DELTCO2/PCO2	28	-2.5	3.44
DELTCO2	28	4.5	6.01
DELTCO2/TCO2	28	0.2	0.28

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	8	31 20.0 N	71 30.0 W	8 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
301	12	18.595	36.572	2390.	2051.	1.4	0.05	297.1	311.9	-14.8	-4.97	2040.2	10.8	0.53
304	403	17.897	36.515	2371.	2068.	1.9	0.18	339.8	361.9	-22.1	-6.50	2054.5	13.5	0.65
306	600	15.949	36.161	2350.	2116.	3.9	0.60	452.4	498.9	-46.5	-10.27	2097.1	18.9	0.89
308	803	11.916	35.534	2332.	2154.	9.5	1.18	653.2	665.9	-12.7	-1.94	2150.7	3.3	0.15
310	1001	7.639	35.117	2319.	2182.	15.0	1.53	823.4	845.4	-22.0	-2.67	2177.9	4.1	0.19
312	1192	5.506	35.068	2302.	2159.	13.9	1.38	773.5	801.2	-27.7	-3.58	2153.5	5.5	0.26
314	1498	4.555	35.022	2299.	2157.	12.9	1.27	730.8	803.1	-72.3	-9.89	2142.1	14.9	0.69
316	1997	3.888	34.996	2304.	2161.	14.9	1.27	721.6	800.3	-78.7	-10.91	2144.5	16.5	0.76
318	2499	3.335	34.969	2303.	2152.	19.2	1.29	718.4	760.9	-42.5	-5.91	2142.8	9.2	0.43
320	3475	2.579	34.921	2317.	2166.	24.2	1.29	721.3	767.7	-46.4	-6.43	2155.9	10.1	0.46
322	4446	2.338	34.898	2326.	2173.	30.8	1.36	731.1	764.3	-33.2	-4.54	2165.8	7.2	0.33
324	5262	2.278	34.879	2332.	2179.	41.3	1.49	753.6	769.9	-16.3	-2.16	2175.5	3.5	0.16

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-36.3	20.92
DELPCO2/PCO2	12	-5.8	3.01
DELTCO2	12	9.8	5.07
DELTCO2/TCO2	12	0.5	0.24

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	9	30 59.0 N	73 16.0 W	5 4 81	5208

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	57	18.967	36.639	2387.	2050.	1.5	0.04	298.1	314.5	-16.4	-5.50	2038.1	11.9	0.58
102	204	18.230	36.561	2377.	2066.	1.8	0.12		350.6					
103	403	18.112	36.548	2384.	2061.	1.8	0.12		333.9					
104	503	17.558	36.439	2367.	2110.	2.3	0.26	366.7	451.1	-84.4	-23.01	2067.6	42.4	2.01
105	604	15.669	36.123	2355.	2106.	4.1	0.59		462.8					
106	705	13.635	35.784	2335.	2166.	6.4	0.88	546.4	705.4	-159.0	-29.10	2121.4	44.6	2.06
107	805	11.400	35.473	2323.	2151.	10.3	1.20		684.9					
108	904	8.936	35.211	2321.	2177.	14.0	1.48	801.4	810.6	-9.2	-1.14	2175.2	1.8	0.08
109	1002	7.163	35.094	2314.	2173.	15.8	1.50		820.3					
110	1102	6.121	35.076	2318.	2173.	14.9	1.40	795.6	800.5	-4.9	-0.61	2172.0	1.0	0.04
111	1201	5.620	35.076	2311.	2160.	14.1	1.32		766.2					
112	1301	5.107	35.059	2306.	2163.	13.7	1.25	750.1	802.2	-52.1	-6.95	2152.4	10.6	0.49
113	1497	4.497	35.027	2305.	2149.	13.3	1.20		737.6					
114	1740	4.110	35.005	2301.	2152.	14.2	1.19	721.98	768.4	-46.5	-6.44	2142.0	10.0	0.46
115	1981	3.775	34.992	2304.	2145.	16.1	1.20		723.4					
116	2238	3.469	34.978	2305.	2154.	18.4	1.20	717.2	760.4	-43.2	-6.03	2144.6	9.4	0.44
117	2490	3.227	34.962	2309.	2148.	20.3	1.21		717.2					
118	2994	2.827	34.937	2313.	2161.	22.7	1.20	717.9	760.6	-42.7	-5.94	2151.7	9.3	0.43
119	3482	2.506	34.917	2313.	2153.	25.0	1.19		723.3					
120	3482	2.506	34.916	2315.	2163.	25.1	1.19	722.9	760.7	-37.8	-5.23	2154.8	8.2	0.38
121	3991	2.357	34.902	2314.	2157.	28.6	1.21		737.7					
122	4487	2.312	34.895	2315.	2165.	32.2	1.25	732.8	771.6	-38.8	-5.29	2156.7	8.3	0.38
123	4987	2.249	34.880	2325.	2169.	40.4	1.34		750.1					
124	5080	2.211	34.874	2329.	2179.	44.0	1.38	759.5	781.7	-22.2	-2.93	2174.4	4.6	0.21

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-46.4	39.69
DELPCO2/PCO2	12	-8.2	8.32
DELTCO2	12	13.5	13.81
DELTCO2/TCO2	12	0.6	0.65

S SINGLE ANALYSIS

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	11	30 50.3 N	74 3.0 W	10 4 81	4491

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
341	3	19.096H	36.640	2386.	2038.	0.6	0.03		299.0					
201	7	19.114	36.622	2388.	2042.	0.4	0.04	290.9	302.2	-11.3	-3.87	2033.5	8.5	0.42
203	96	18.371	36.591	2382.	2064.	1.3	0.09	318.4	340.9	-22.5	-7.07	2049.1	14.9	0.72
342	199	18.369H	36.588	2383.	2067.	1.3	0.09		344.7					
205	295	18.142	36.550	2385.	2058.	1.4	0.12	322.7	328.0	-5.3	-1.66	2054.4	3.6	0.17
343	396	17.557H	36.444	2381.	2078.	2.0	0.26		364.5					
344	495	16.516H	36.262	2381.	2135.	2.9	0.47		480.9					
207	595	14.881	35.986		2120.	4.9	0.70	486.8						
209	793	10.906	35.414	2336.	2152.	10.8	1.26	695.3	643.8	51.5	7.41	2165.1	-13.1	-0.61
346	991	7.147H	35.094	2315.	2179.	15.4	1.51		847.7					
211	1095	6.083	35.076	2311.	2172.	14.6	1.39	790.1	827.7	-37.6	-4.75	2164.7	7.3	0.34
347	1239	5.288H	35.062	2326.	2156.	13.7	1.31		688.8					
213	1394	4.774	35.037			13.0	1.24	736.9						
348	1483	4.468H	35.010	2308.	2154.	12.8	1.22		748.3					
215	1593	4.353	35.014	2307.	2155.	13.0	1.20	724.5	757.0	-32.5	-4.48	2147.9	7.1	0.33
349	1732	4.114H	35.002		2145.	13.7	1.22							
217	1892	3.949	35.000	2321.	2146.	14.7	1.20	719.2	664.4	54.8	7.62	2159.1	-13.1	-0.61
141	2053	3.772H	34.991	2308.	2145.	15.5	1.23		707.6					
142	2299	3.570H	34.980	2308.	2154.	18.1	1.24		748.6					
219	2391	3.431	34.974			18.3	1.22	716.2						
143	2544	3.277H	34.963	2302.	2143.	19.1	1.24		722.1					
221	2689	2.946	34.944		2149.	20.8	1.22	715.5						
144	3231	2.655H	34.927	2312.	2158.	22.5	1.22		749.9					
223	3287	2.597	34.925	2312.	2159.	22.5	1.21	721.5	754.5	-33.0	-4.58	2151.8	7.2	0.33
145	3622	2.390H	34.909		2152.	26.1	1.24							

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	SIN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	11	30 50.3 N	74 3.0 W	10 4 81	4491

			MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
227	3795	2.318	34.905		2154.	27.3	1.23	726.2	*						
146	3914	2.292H	34.904	2319.	2167.	27.9	1.26		*	764.0					
147	4012	2.279H	34.899	2318.	2157.	29.7	1.28		*	722.1					
228	4093	2.265	34.897	2318.	2167.	30.9	1.27	735.2	*	768.4	-33.2	-4.51	2159.9	7.1	0.33
148	4206	2.256H	34.894	2323.	2168.	31.9	1.30		*	753.0					
229	4247	2.248	34.895			32.5	1.29	738.1	*						
230	4295	2.232	34.893	2327.	2163.	34.1	1.31	744.8	*	714.4	30.4	4.08	2169.8	-6.8	-0.31
149	4460	2.241H	34.891	2326.	2164.	34.2	1.33		*	722.9					
231	4345	2.236	34.891			34.3	1.31	741.0	*						
232	4394	2.242	34.894	2325.	2171.	34.4	1.31	744.8	*	759.1	-14.3	-1.93	2167.9	3.1	0.14
233	4433	2.248	34.892			34.4	1.31	741.6	*						
234	4463	2.251	34.894		2168.	34.3	1.31	745.1	*						
235	4482	2.254	34.892			34.2	1.31	744.2	*						
236	4489	2.255	34.892	2323.	2173.	34.2	1.31	742.0	*	777.2	-35.2	-4.75	2165.5	7.5	0.34

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-7.4	32.53
DELPCO2/PCO2	12	-1.5	4.82
DELTCO2	12	2.8	8.55
DELTCO2/TCO2	12	0.1	0.40

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	13	29 55.8 N	77 21.1 W	11 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (D)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
169	9	23.140	36.335	2378.	2017.	1.0	0.03	261.5	277.9	-16.4	-6.28	2003.1	13.9	0.69
127	59	21.074	36.582	2370.	2022.	0.9	0.02	277.9	294.2	-16.3	-5.87	2009.2	12.8	0.63
128	152	19.874	36.633	2383.	2064.	1.3	0.09	318.4	340.4	-22.0	-6.91	2049.4	14.6	0.71
129	251	18.653	36.561	2368.	2066.	1.4	0.15	341.1	363.0	-21.9	-6.42	2052.7	13.3	0.64
130	350	18.130	36.509	2375.	2085.	1.6	0.20	347.2	386.4	-39.2	-11.28	2062.4	22.6	1.09
131	425	17.579	36.431	2358.	2077.	2.0	0.29	373.0	397.2	-24.2	-6.49	2064.0	13.0	0.63
132	499	16.940	36.325	2371.	2099.	2.5	0.41	402.5	419.1	-16.6	-4.12	2090.7	8.3	0.39
133	587	15.187	36.036	2338.	2113.	4.6	0.70	492.4	517.2	-24.8	-5.03	2103.8	9.2	0.44
134	685	13.216	35.741	2335.	2137.	6.7	0.95	567.9	596.0	-28.1	-4.94	2128.4	8.6	0.40
135	784	10.895	35.408	2308.	2154.	11.2	1.32	720.5	756.4	-35.9	-4.98	2146.1	7.9	0.37
136	842	9.141	35.206	2312.	2172.	14.8	1.54		826.7					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	10	-24.5	7.52
DELPCO2/PCO2	10	-6.2	1.88
DELTCO2	10	12.4	4.18
DELTCO2/TCO2	10	0.6	0.21

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	1	14	28 45.8 N	79 46.5 W	11 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
169	7	25.570	36.118			1.7	0.05	250.4						
241	12	25.548H	36.118	2341.	1984.	1.9	0.04		271.8					
127	44	25.572	36.118			1.7	0.02	251.2						
130	69	25.521	36.134			1.5	0.02	253.4						
131	72	25.501	36.131			1.5	0.03	255.1						
132	77	25.452	36.156			1.6	0.02	256.0						
129	79	25.177	36.249			1.5	0.04	270.6						
128	82	25.161	36.256			1.5	0.05	270.4						
242	86	24.827H	36.415	2369.	2045.	1.7	0.09		326.5					
133	155	19.956	36.586			2.5	0.35	390.0						
134	253	15.679	36.093			5.4	0.77	514.0						
135	410	9.720	35.223			15.5	1.60	834.3						
136	500	7.621	34.977			21.1	1.85	957.7						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	15	25 34.5 N	76 23.0 W	17 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
370	3	22.801H	36.759			1.2	0.00	263.3						
201	11	22.861	36.762	2400.	2042.	1.3	0.02	262.3	290.5	-28.2	-10.76	2018.5	23.5	1.15
371	15	22.790H	36.759			1.2	0.00	262.5						
141	17	22.794H	36.746	2405.	2043.	1.3	0.03		286.7					
372	28	22.102H	36.692			1.0	0.00	265.5						
373	30	22.054H	36.692			1.0	0.00	266.9						
374	32	21.729H	36.688			1.1	0.00	265.9						
375	35	21.584H	36.670			1.0	0.00	267.2						
377	50	21.139H	36.612			0.6	0.00	268.9						
142	105	20.863H	36.642	2405.	2052.	0.8	0.01		297.3					
204	194	19.082	36.602	2409.	2085.	1.1	0.06	320.4	339.7	-19.3	-6.03	2072.0	13.0	0.62
143	254	18.752H	36.594	2396.	2079.	1.3	0.08		346.8					
206	346	17.971	36.498	2385.	2089.	1.7	0.19	346.2	378.5	-32.3	-9.32	2070.0	19.0	0.91
144	398	17.637H	36.448	2383.	2099.	2.0	0.25		399.6					
145	497	16.192H	36.202	2373.	2124.	3.4	0.54		470.2					
208	543	15.295	36.049	2373.	2142.	4.5	0.65	474.8	514.7	-39.9	-8.41	2126.5	15.5	0.73
146	597	13.648H	35.805	2356.	2140.	6.1	0.88		548.3					
209	637	13.133	35.726	2348.	2159.	6.9	0.96	582.0	633.3	-51.3	-8.81	2144.1	14.9	0.69
147	696	11.558H	35.504	2337.	2176.	10.1	1.24		739.4					
211	784	9.562	35.259		2197.	13.9	1.47	783.9						
148	843	8.500H	35.161	2326.	2189.	15.4	1.56		850.2					
212	880	7.918	35.118			16.1	1.56	838.3						
213	924	7.166	35.091	2322.	2196.	15.9	1.51	825.8	909.2	-83.4	-10.10	2181.2	14.8	0.68
149	985	6.187H	35.070	2322.	2187.	14.9	1.43		856.1					
214	1070	5.465	35.050	2333.	2191.	13.9	1.32	768.9	822.6	-53.7	-6.99	2180.2	10.8	0.49

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	15	25 34.5 N	76 23.0 W	17 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
215	1172	5.063	35.036	2320.	2180.	13.8	1.28	752.4	825.2	-72.8	-9.68	2165.4	14.6	0.67
216	1280	4.825	35.026	2332.	2186.	13.5	1.25	746.8	800.6	-53.8	-7.21	2174.8	11.2	0.51
217	1385	4.468	35.009			13.0	1.22	731.5						
441	1527	4.180H	34.999	2324.	2170.	13.1	1.21		756.3					
218	1698	3.992	34.990	2315.	2170.	13.9	1.19	721.4	795.4	-74.0	-10.25	2154.4	15.6	0.72
219	1815	3.921	34.988			14.2	1.19	719.6						
442	2013	3.809H	34.987	2329.	2177.	14.9	1.20		768.3					
220	2115	3.704	34.982	2320.	2168.	15.6	1.20	717.5	763.7	-46.2	-6.43	2157.9	10.1	0.47
221	2318	3.442	34.970	2318.	2169.	17.3	1.21	715.3	777.1	-61.8	-8.64	2155.6	13.4	0.62
443	2501	3.243H	34.961	2320.	2168.	18.5	1.22		763.6					
222	2620	3.175	34.956			19.1	1.21	716.5						
223	2735	3.073	34.950	2336.	2181.	19.8	1.21	715.1	758.1	-43.0	-6.01	2171.5	9.5	0.44
224	2877	2.939	34.942	2320.	2174.	20.6	1.20	717.4	792.7	-75.3	-10.50	2157.9	16.1	0.74
444	2990	2.788H	34.935	2334.	2179.	20.8	1.20		756.8					
227	3103	2.699	34.929			21.8	1.20	716.5						
228	3228	2.585	34.922	2328.	2171.	23.0	1.21	719.0	744.9	-25.9	-3.60	2165.2	5.8	0.27
229	3345	2.527	34.917	2322.	2173.	23.4	1.21	720.4	779.3	-58.9	-8.17	2160.3	12.7	0.58
445	3479	2.485H	34.916	2324.	2175.	24.4	1.22		780.1					
230	3597	2.389	34.908			26.0	1.22	725.4						
446	3721	2.395H	34.910	2341.	2183.	26.4	1.23		746.9					
231	3852	2.331	34.903	2343.	2189.	27.9	1.24	726.0	767.0	-41.0	-5.65	2180.0	9.0	0.41
447	3962	2.333H	34.902	2328.	2181.	28.7	1.26		793.3					
232	4114	2.292	34.897			30.3	1.27	731.4						
448	4206	2.304H	34.898	2345.	2189.	30.5	1.27		759.3					
233	4273	2.273	34.894	2336.	2189.	31.8	1.28	733.7	798.4	-64.7	-8.82	2175.3	13.7	0.62

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	15	25 34.5 N	76 23.0 W	17 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
234	4371	2.265	34.892			33.1	1.30	737.9						
449	4446	2.315H	34.897	2331.	2185.	31.6	1.28		800.2					
235	4575	2.243	34.885D	2341.	2193.	35.4	1.31	732.6	796.5	-63.9	-8.73	2179.4	13.6	0.62
236	4677	2.244	34.884	2343.	2196.	37.7	1.35	745.3	802.9	-57.6	-7.72	2184.0	12.0	0.55

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	20	-52.4	17.34
DELPCO2/PCO2	20	-8.1	1.83
DELTCO2	20	13.4	3.70
DELTCO2/TCO2	20	0.6	0.18

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TID	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	16	22 51.2 N	73 9.5 W	19 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
341	12	24.675H	36.550	2390.	2023.	1.4	0.02		275.4					
201	13	24.626	36.562	2390.	2025.	1.6	0.00	251.9	277.6	-25.7	-10.22	2002.6	22.4	1.11
202	55	23.703	36.724	2401.	2037.	1.3	0.00	253.5	282.9	-29.4	-11.62	2011.6	25.4	1.25
340	101	22.496H	36.694	2395.	2037.	1.1	0.02		288.6					
203	156	20.274	36.700	2394.	2067.	1.1	0.04	313.5	331.6	-18.1	-5.76	2054.6	12.4	0.60
204	205	19.288	36.630	2395.	2093.	1.2	0.09		371.9					
343	250	18.596H	36.558	2390.	2091.	1.2	0.15		375.1					
205	307	18.132	36.508	2383.	2088.	1.6	0.20	349.0	379.8	-30.8	-8.83	2070.0	18.0	0.86
206	352	17.833	36.477					359.85						
209	353	17.835	36.475	2385.	2096.	1.8	0.23	362.1	391.2	-29.1	-8.03	2079.7	16.3	0.78
344	397	17.467H	36.425	2379.	2099.	1.9	0.27		406.2					
210	453	16.755	36.305	2373.	2112.	2.6	0.42		443.4					
345	494	15.950H	36.164	2369.	2126.	3.2	0.56		482.9					
211	551	14.667	35.968	2359.	2136.	4.7	0.74	505.3	530.7	-25.4	-5.03	2126.8	9.2	0.43
346	594	13.533H	35.783	2342.	2147.	6.3	0.92		609.7					
212	646	12.683	35.655	2339.	2162.	7.9	1.07		674.3					
347	694	11.165H	35.447	2333.	2182.	10.5	1.30		784.2					
213	746	10.476	35.351	2329.	2188.	12.3	1.41	760.0	832.2	-72.2	-9.50	2173.5	14.5	0.66
214	793	9.565	35.249	2320.	2186.	14.0	1.50		864.3					
348	839	8.330H	35.133	2317.	2190.	15.9	1.61		902.5					
215	892	7.569	35.092	2323.	2198.	16.6	1.61	851.5	917.1	-65.6	-7.70	2186.6	11.4	0.52
216	943	6.760	35.026	2316.	2193.	17.9	1.64		924.4					
349	987	6.261H	35.045	2322.	2192.	16.5	1.51		884.8					
217	1135	5.274	35.050	2311.	2196.	13.4	1.31	760.3	967.6	-207.3	-27.27	2158.9	37.1	1.69
218	1283	4.665	35.027	2312.	2164.	12.8	1.23		779.5					

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	16	22 51.2 N	73 9.5 W	19 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
141	1509	4.165H	35.000	2324.	2168.	13.2	1.21		747.0					
219	1753	3.884	34.993	2318.	2170.	14.3	1.20	715.4*	781.6	-66.2	-9.26	2155.7	14.3	0.66
142	2043	3.551H	34.979	2315.	2159.	16.5	1.22		742.6					
220	2291	3.346	34.967	2317.	2165.	17.9	1.22		762.3					
143	2590	3.082H	34.954	2323.	2173.	20.5	1.23		775.7					
221	2802	2.864	34.940	2321.	2171.	20.9	1.21	719.2	773.7	-54.5	-7.58	2159.2	11.8	0.54
144	3087	2.683H	34.929	2318.	2168.	22.3	1.21		772.0					
222	3285	2.618	34.924	2322.	2167.	22.5	1.21		750.9					
223	3661	2.402	34.909	2326.	2177.	25.8	1.23	723.7	782.1	-58.4	-8.07	2164.5	12.5	0.58
145	3681	2.410H	34.911	2324.	2175.	26.4	1.23		781.0					
146	3834	2.331H	34.903	2327.	2175.	28.8	1.26		768.3					
224	3904	2.319	34.902	2325.	2174.	28.3	1.25		771.9					
147	4085	2.295H	34.898	2331.	2185.	30.9	1.28		800.5					
227	4162	2.291	34.897	2330.	2183.	30.6	1.28	735.0	794.5	-59.5	-8.09	2170.5	12.5	0.57
148	4327	2.272H	34.894	2329.	2178.	33.3	1.30		775.3					
228	4411	2.276	34.892	2329.	2180.	32.8	1.30	737.3	785.0	-47.7	-6.48	2169.9	10.1	0.46
229	4573	2.261	34.888	2335.	2189.	35.2	1.33	745.4	804.0	-58.6	-7.86	2176.8	12.2	0.56
149	4590	2.245H	34.887	2335.	2190.	37.1	1.35		809.0					
236	4686	2.235	34.884	2337.	2192.	37.8	1.36	745.9	809.8	-63.9	-8.57	2178.8	13.2	0.60

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	16	-57.0	42.47
DELPCO2/PCO2	16	-9.4	4.88
DELTCO2	16	15.8	6.90
DELTCO2/TCO2	16	0.7	0.33

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

FID	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	18	24 6.1 N	72 2.6 W	20 4 81	

		MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INS(ITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
277	5	24.461H	36.551					250.2						
101	13	24.465	36.547	2393.	2020.	1.4	0.01	249.7	268.8	-19.1	-7.64	2003.0	17.0	0.84
102	13	24.465	36.531D	2390.	2023.	1.4	0.00	246.6	275.1	-28.5	-11.55	1997.8	25.2	1.25
276	30	24.149H	36.649					249.6						
275	35	23.957H	36.776					267.5						
274	41	23.769H	36.818					269.2						
273	46	23.455H	36.757					269.6						
272	51	23.3 1	36.783					268.0						
271	57	23.061H	36.766					266.1						
270	62	22.950H	36.749					259.5						
103	67	22.752	36.715D	2408.	2045.	1.1	0.00	265.8	285.8	-20.0	-7.54	2028.7	16.8	0.82
104	67	22.752	36.715D	2397.	2038.	1.1	0.00	264.0	288.1	-24.1	-9.11	2018.0	20.0	0.98
105	97	21.721	36.692	2401.	2052.	1.0	0.00	281.8	301.9	-20.1	-7.15	2036.3	15.7	0.76
106	296	18.072	36.489D	2389.	2096.	1.7	0.20	351.6	385.1	-33.5	-9.52	2076.7	19.3	0.92
109	296	18.071	36.488D	2399.	2094.	1.7	0.20	356.1	367.2	-11.1	-3.12	2087.4	6.6	0.32
110	396	17.129	36.352D	2374.	2100.	2.3	0.34	387.7	416.3	-28.6	-7.37	2085.3	14.7	0.70
111	497	15.462	36.078D	2376.	2131.	4.1	0.62	476.6	479.8	-3.2	-0.68	2129.7	1.3	0.06
112	596	13.419	35.763D	2346.	2149.	6.6	0.93	581.5	604.7	-23.2	-3.98	2142.0	7.0	0.32
113	696	11.268	35.449	2347.	2179.	10.6	1.27	716.1	713.6	2.5	0.35	2179.6	-0.6	-0.03
114	845	8.547	35.163D	2319.	2189.	15.3	1.52	828.2	885.0	-56.8	-6.86	2178.7	10.3	0.47
115	996	6.612	35.061	2344.	2210.	16.4	1.50	837.1	874.9	-37.8	-4.51	2203.1	6.9	0.31
116	1194	5.194	35.053D	2319.	2171.	13.6	1.26	754.4	783.8	-29.4	-3.90	2164.9	6.1	0.28
117	1394	4.159	35.017	2322.	2170.	12.9	1.19	733.5	764.8	-31.3	-4.27	2163.3	6.7	0.31
118	1591	4.098	34.997D	2315.	2161.	13.4	1.16	722.6	751.2	-28.6	-3.96	2154.7	6.3	0.29
119	1760	3.373	34.991	2326.	2167.	14.5	1.17	721.9	733.8	-11.9	-1.65	2164.3	2.7	0.12

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	18	24 6.1 N	72 2.6 W	20 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
120	1977	3.698	34.983D	2313.	2162.	15.6	1.17	718.7	764.4	-45.7	-6.37	2152.0	10.0	0.46
121	2478	3.192	34.959D		2171.	19.9	1.20	719.6						
122	3064	2.765	34.932D	2318.	2165.	22.5	1.19	718.7	757.9	-39.2	-5.46	2156.4	8.6	0.40
123	3557	2.506	34.914D	2329.	2177.	25.5	1.20	719.1	768.3	-49.2	-6.84	2166.3	10.7	0.49
124	4051	2.365	34.903	2321.	2171.	28.0	1.22	729.1	774.3	-45.2	-6.20	2161.3	9.7	0.45
127	5420	2.198	34.862D		2202.	47.4	1.43	768.4						
128	5428	2.183	34.861D					771.3						
129	5437	2.175	34.860D					772.9						
131	5446	2.166	34.857D					774.6						
133	5458	2.095	34.849D					785.4						
135	5472	2.095	34.850D					784.2						
136	5475	2.096	34.851	2348.	2204.	53.9	1.50	784.0	824.7	-40.7	-5.19	2195.9	8.1	0.37

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-28.4	14.53
DELPCO2/PCO2	22	-5.6	2.81
DELTCO2	22	10.4	6.33
DELTCO2/TCO2	22	0.5	0.31

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

CTD	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	20	25 47.0 N	70 25.5 W	21 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
440	9	22.335H	36.785	2407.	2045.	1.1	0.01		287.4					
201	13	22.960	36.807	2411.	2050.	1.2	0.03	265.9	290.0	-24.1	-9.05	2030.0	20.0	0.97
202	51	20.674	36.683	2405.	2049.	1.4	0.02	275.4	293.7	-18.3	-6.66	2034.3	14.7	0.72
441	96	19.590H	36.621	2398.	2067.	0.8	0.01		325.9					
203	149	18.694	36.566	2396.	2084.	1.4	0.12	339.9	354.9	-15.0	-4.41	2074.6	9.4	0.45
204	198	18.300	36.532	2395.	2093.	1.7	0.17	341.3	371.3	-30.0	-8.80	2074.8	18.2	0.87
443	238	18.034H	36.508	2388.	2090.	1.5	0.19		376.0					
205	303	17.733	36.469	2391.	2099.	2.0	0.22	356.8	387.6	-30.8	-8.64	2081.4	17.6	0.84
206	335	17.462	36.433	2387.	2099.	2.1	0.26	364.1	393.5	-29.4	-8.08	2082.6	16.4	0.78
140	400	16.916H	36.334	2383.	2107.	2.5	0.38		415.1					
207	403	16.960	36.346	2380.	2113.	2.6	0.37	393.9	432.6	-38.7	-9.83	2093.8	19.2	0.91
208	454	16.211	36.212	2378.	2122.	3.5	0.51	429.9	455.6	-25.7	-5.99	2110.4	11.6	0.55
209	503	15.289	36.049	2365.	2134.	4.5	0.64	473.1	511.5	-38.4	-8.11	2119.0	15.0	0.70
141	549	14.041H	35.858	2360.	2142.	5.5	0.78		544.1					
210	604	13.044	35.707	2346.	2153.	7.0	0.93	569.8	617.3	-47.5	-8.34	2138.7	14.3	0.66
211	654	11.847	35.540	2341.	2170.	9.1	1.12	639.4	698.4	-59.0	-9.23	2155.0	15.0	0.69
143	701	10.926H	35.434	2338.	2172.	10.3	1.21		716.9					
212	752	9.681	35.284	2333.	2186.	13.3	1.42	772.7	802.6	-29.9	-3.87	2179.9	6.1	0.28
213	801	8.548	35.182	2327.	2192.	15.0	1.53	820.7	862.1	-41.4	-5.05	2184.3	7.7	0.35
144	849	7.674H	35.103	2328.	2197.	16.2	1.54		884.2					
214	928	6.674	35.092	2325.	2194.	15.8	1.49	817.5	881.4	-63.9	-7.82	2182.3	11.7	0.53
145	999	5.882H	35.062	2328.	2181.	14.9	1.38		795.4					
215	1089	5.356	35.055	2323.	2180.	13.9	1.31	765.8	812.3	-46.5	-6.07	2170.6	9.4	0.43
146	1197	4.805H	35.038	2325.	2174.	13.0	1.22		771.7					
216	1279	4.612	35.027	2323.	2168.	12.9	1.22	735.2	751.8	-16.6	-2.26	2164.4	3.6	0.17

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	20	25 47.0 N	70 25.5 W	21 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
217	1365	4.375	35.012	2319.	2167.	12.8	1.21	728.9	763.4	-34.5	-4.74	2159.5	7.5	0.34
147	1498	4.161H	35.004	2317.	2163.	13.3	1.18		752.3					
218	1549	4.083	35.001	2318.	2165.	13.5	1.19	719.5	757.7	-38.2	-5.31	2156.6	8.4	0.39
219	1740	3.853	34.992	2323.	2170.	14.6	1.20	719.5	760.7	-41.2	-5.73	2161.0	9.0	0.42
148	1996	3.536H	34.982	2325.	2165.	17.0	1.20		729.5					
220	2215	3.362	34.973	2326.	2165.	19.2	1.22	714.0	726.2	-12.2	-1.71	2162.2	2.8	0.13
221	2710	2.934	34.946	2328.	2171.	23.0	1.24	722.7	773.1	-50.4	-6.98	2166.1	10.9	0.50
340	2968	2.724H	34.931	2325.	2168.	23.0	1.21		742.8					
222	3205	2.582	34.921	2324.	2178.	24.3	1.23	719.0	795.5	-76.5	-10.64	2161.7	16.3	0.75
343	3448	2.447H	34.914	2328.	2174.	25.8	1.22		758.5					
223	3704	2.376	34.907	2328.	2175.	27.1	1.23	725.5	764.0	-38.5	-5.31	2166.6	8.4	0.39
344	3955	2.329H	34.902	2331.	2175.	29.4	1.25		751.6					
224	4203	2.319	34.900	2333.	2179.	30.2	1.27	729.4	762.4	-33.0	-4.52	2171.8	7.2	0.33
346	4445	2.311H	34.895	2335.	2182.	32.3	1.28		768.1					
227	4711	2.303	34.893	2337.	2183.	34.1	1.30	743.4	764.9	-21.5	-2.89	2178.4	4.6	0.21
347	4944	2.302H	34.887	2339.	2187.	36.4	1.32		776.1					
228	5210	2.239	34.875	2343.	2196.	42.6	1.41	754.8	804.7	-49.9	-6.62	2185.7	10.3	0.47
348	5338	2.162H	34.862	2351.	2205.	48.4	1.46		815.2					
229	5439	2.119	34.856	2351.	2205.	52.5	1.51	781.2	816.3	-35.1	-4.50	2197.9	7.1	0.32
236	5503	2.114	34.851	2355.	2208.	53.5	1.52	782.9	813.2	-30.3	-3.87	2201.9	6.1	0.28

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	28	-36.3	14.66
DELPCO2/PCO2	28	-6.3	2.31
DELTCO2	28	11.0	4.80
DELTCO2/TCO2	28	0.5	0.23

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	22	25 47.0 N	66 0.1 W	23 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	13	23.091	36.686	2412.	2038.	1.4	0.02	254.4	273.4	-19.0	-7.48	2021.2	16.8	0.82
102	73	20.316	36.676	2409.	2071.	1.1	0.01	293.9	319.3	-25.4	-8.66	2052.3	18.7	0.90
103	144	18.9350	36.588	2405.	2091.	1.3	0.08	337.2	354.5	-17.3	-5.12	2080.1	10.9	0.52
104	244	18.143	36.516	2390.	2094.	1.7	0.19	345.9	380.4	-34.5	-9.97	2073.7	20.3	0.97
105	345	17.616	36.451	2395.	2098.	2.0	0.25	359.5	379.6	-20.1	-5.58	2086.4	11.6	0.55
106	446	16.559	36.274	2377.	2115.	2.8	0.44	415.8	442.2	-26.4	-6.34	2102.6	12.4	0.59
107	544	14.790	35.982	2357.	2137.	4.7	0.70	491.9	538.5	-46.6	-9.47	2119.9	17.0	0.80
108	644	13.093	35.7250	2349.	2153.	6.8	0.96	577.4	609.0	-31.6	-5.47	2143.5	9.5	0.44
111	744	11.108	35.455	2344.	2177.	10.3	1.25	686.9	716.1	-29.2	-4.25	2170.0	7.0	0.32
112	840	9.360	35.246	2331.	2193.	14.1	1.49	791.0	849.0	-58.0	-7.33	2181.8	11.2	0.51
113	940	7.624	35.090	2329.	2200.	17.0	1.63	856.2	897.1	-40.9	-4.78	2192.8	7.2	0.33
114	1038	6.472	35.043	2328.	2198.	17.6	1.59	848.7	889.4	-40.7	-4.79	2190.8	7.2	0.33
115	1188	5.591	35.060	2330.	2186.	15.3	1.40	781.9	812.0	-30.1	-3.85	2180.0	6.0	0.27
116	1386	4.732	35.044	2325.	2175.	13.8	1.27	736.8	777.5	-40.7	-5.53	2166.3	8.7	0.40
117	1587	4.214	35.016	2326.	2169.	14.1	1.23	721.0	744.0	-23.0	-3.20	2163.9	5.1	0.24
118	1883	3.742	34.991	2321.	2167.	15.9	1.23	718.4	754.9	-36.5	-5.09	2159.0	8.0	0.37
119	2176	3.448	34.981	2326.	2170.	19.5	1.27	716.9	749.2	-32.3	-4.51	2162.8	7.2	0.33
120	2577	3.093	34.960	2335.	2179.	25.1	1.32	726.5	754.9	-28.4	-3.92	2172.7	6.3	0.29
121	2967	2.831	34.940	2335.	2181.	28.8	1.34	727.0	764.3	-37.3	-5.13	2172.8	8.2	0.37
122	3458	2.546	34.917	2334.	2178.	29.8	1.31	726.6	754.1	-27.5	-3.78	2171.9	6.1	0.28
123	3967	2.377	34.903	2335.	2179.	30.9	1.30	725.2	754.3	-29.1	-4.02	2172.6	6.4	0.30
124	4320	2.293	34.894	2336.	2182.	34.0	1.33	734.6	765.1	-30.5	-4.15	2175.4	6.6	0.30
127	4674	2.229	34.881	2341.	2192.	39.5	1.40	745.5	793.1	-47.6	-6.38	2182.0	10.0	0.46
128	5009	2.171	34.869	2344.	2194.	45.9	1.48	764.4	790.5	-26.1	-3.42	2188.6	5.4	0.25
129	5308	2.163	34.864	2351.	2202.	49.1	1.50	768.8	800.5	-31.7	-4.12	2195.5	6.5	0.30

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	22	25 47.0 N	66 0.1 W	23 4 81	

	MEASURED QUANTITIES							CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	25	-32.4	9.35
DELPCO2/PCO2	25	-5.5	1.81
DELTCO2	25	9.6	4.26
DELTCO2/TCO2	25	0.4	0.21

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	23	24 33.7 N	65 6.2 W	23 4 81	

	MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
127	7	24.264	36.610			1.6	0.02	247.6						
128	7	24.235	36.610					244.7						
129	16	23.970	36.596					246.4						
130	19	23.948	36.597					243.1						
131	20	23.939	36.605					246.8						
132	21	23.794	36.616					244.1						
133	23	23.760	36.631					248.4						
134	29	23.634	36.649					246.6						
135	62	23.042	36.686			1.5	0.02	355.5						
136	99	21.564	36.735			1.2	0.01	280.1						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	24	23 17.7 N	64 9.6 W	24 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	12	24.026	36.645	2403.	2021.	1.5	0.02	248.7S	261.6	-12.9	-5.18	2009.2	11.8	0.58
341	12	24.024H	36.614	2403.	2020.	1.7	0.00		260.3					
202	78	23.045	36.807	2410.	2041.	1.3	0.01	252.5	279.7	-27.2	-10.78	2017.2	23.8	1.17
203	146	20.300	36.730	2407.	2086.	1.1	0.04	333.1	344.7	-11.6	-3.49	2078.5	7.5	0.36
343	203	18.833H	36.586	2394.	2099.	1.6	0.12		384.0					
204	244	18.473	36.553	2387.	2097.	1.5	0.19	363.2	390.5	-27.3	-7.51	2081.7	15.3	0.73
205	294	17.894	36.475	2390.	2097.	1.8	0.24	370.6	385.4	-14.8	-4.00	2088.7	8.3	0.40
208	345	17.453	36.416	2381.	2102.	2.0	0.30	380.1	408.8	-28.7	-7.54	2086.9	15.1	0.72
344	402	16.488H	36.261	2380.	2113.	3.2	0.48		432.4					
209	492	14.931	36.006	2366.	2129.	4.3	0.67	497.3	495.7	1.6	0.32	2129.6	-0.6	-0.03
345	601	12.714H	35.680	2347.	2156.	7.5	0.98		625.2					
210	694	11.131	35.455	2333.	2170.	10.3	1.24	698.1	727.8	-29.7	-4.26	2163.1	6.9	0.32
346	800	8.935H	35.178	2328.	2190.	15.6	1.57		846.2					
211	892	7.544	35.044	2328.	2201.	18.2	1.71	900.1	908.5	-8.4	-0.93	2199.6	1.4	0.06
347	1003	6.488H	35.001	2321.	2200.	19.2	1.66		939.5					
212	1117	5.759	35.025	2321.	2183.	16.5	1.48	814.4	839.0	-24.6	-3.02	2178.4	4.6	0.21
348	1251	5.012H	35.033	2323.	2171.	14.8	1.32		767.0					
213	1365	4.708	35.028	2325.	2165.	13.9	1.27	745.7	730.5	15.2	2.03	2168.3	-3.3	-0.15
349	1501	4.342H	35.013	2315.	2162.	13.9	1.22		756.8					
214	1611	4.143	35.007	2316.	2162.	13.9	1.22	722.2	752.7	-30.5	-4.22	2155.3	6.7	0.31
215	1858	3.811	34.998	2326.	2165.	15.7	1.22	719.6	725.9	-6.3	-0.87	2163.6	1.4	0.07
441	1988	3.679H	34.998	2323.	2158.	18.2	1.24		707.4					
216	2175	3.371	34.976	2322.	2167.	19.9	1.25	717.7	751.2	-33.5	-4.67	2159.6	7.4	0.34
217	2358	3.205	34.966	2332.	2167.	22.0	1.27	721.9	712.1	9.8	1.35	2169.2	-2.2	-0.10
443	2585	3.047H	34.954	2332.	2177.	24.4	1.28		757.7					

S SINGLE ANALYSIS

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	24	23 17.7 N	64 9.6 W	24 4 81	

	MEASURED QUANTITIES								*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
218	2749	2.897	34.942		2171.	25.4	1.29	724.3	*						
219	2946	2.756	34.933	2333.	2167.	25.5	1.27	723.4	*	708.3	15.1	2.09	2170.5	-3.5	-0.16
141	3193	2.643H	34.925	2333.	2169.	26.3	1.25		*	716.5					
220	3320	2.546	34.918	2327.	2171.	26.4	1.25	722.3	*	749.4	-27.1	-3.75	2165.0	6.0	0.28
221	3504	2.468	34.913	2335.	2167.	27.7	1.26	724.7	*	700.8	23.9	3.30	2172.5	-5.5	-0.26
143	3792	2.374H	34.905	2332.	2180.	30.7	1.26		*	771.7					
222	3904	2.348	34.902	2328.	2176.	30.0	1.28	727.2	*	769.2	-42.0	-5.78	2166.9	9.1	0.42
144	4189	2.318H	34.899	2331.	2171.	30.9	1.28		*	733.4					
223	4306	2.309	34.895	2337.	2172.	31.8	1.29	732.3	*	714.7	17.6	2.40	2176.0	-4.0	-0.18
145	4584	2.296H	34.892	2337.	2186.	34.6	1.31		*	779.9					
224	4711	2.287	34.888	2335.	2183.	35.0	1.31	738.3	*	774.1	-35.8	-4.85	2175.3	7.7	0.35
146	4983	2.233H	34.878	2341.	2185.	41.6	1.39		*	759.1					
227	5120	2.154	34.864	2368.	2206.	47.3	1.46	768.5	*	747.2	21.3	2.77	2210.6	-4.6	-0.21
147	5381	2.076H	34.851	2356.	2209.	54.3	1.52		*	813.9					
228	5532	2.065	34.846	2348.	2206.	56.0	1.55	790.8	*	835.5	-44.7	-5.65	2197.2	8.8	0.40
149	5789	2.077H	34.845	2352.	2202.	57.2	1.57		*	797.6					
230	5821	2.085	34.845	2357.	2207.	57.5	1.57	796.8	*	800.4	-3.6	-0.45	2206.3	0.7	0.03

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-12.7	20.73
DELPCO2/PCO2	24	-2.6	3.69
DELTCO2	24	4.9	7.16
DELTCO2/TCO2	24	0.2	0.34

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110 LEG [illegible] [illegible] [illegible] 26DA[illegible]E81 BOTTOM

			MEASURED QUANTITIES						*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
340	7	25.720H	36.517	2398.	2004.	1.7	0.03		*	246.6						
201	11	25.697	36.518	2400.	2009.	1.7	0.01	231.8	*	250.2	-18.4	-7.94	*	1991.0	18.0	0.89
202	56	24.687	36.576		2020.	1.6	0.00	235.8	*							
341	98	24.174H	36.813	2412.	2041.	1.3	0.03		*	278.0						
203	136	23.824	37.058	2429.	2065.	1.0	0.00	268.7	*	292.7	-24.0	-8.93	*	2045.1	19.9	0.96
204	156	22.637	37.052	2424.	2090.	1.0	0.00	297.3	*	332.8	-35.5	-11.92	*	2064.5	25.5	1.22
205	206	19.427	36.660	2401.	2092.	1.3	0.06	343.6	*	362.1	-18.5	-5.39	*	2080.6	11.4	0.54
206	305	17.719	36.460	2384.	2099.	2.0	0.23	361.0	*	398.4	-37.4	-10.35	*	2078.3	20.7	0.99
207	355	17.091	36.364	2385.	2105.	2.3	0.34	388.5	*	407.8	-19.3	-4.97	*	2094.9	10.1	0.48
344	398	15.899H	36.169	2367.	2132.	3.5	0.59		*	502.7						
208	455	14.831	36.001	2357.	2135.	4.8	0.72	507.3	*	532.9	-25.6	-5.05	*	2125.7	9.3	0.43
209	505	14.033	35.875	2359.	2145.	5.7	0.83	545.7	*	556.5	-10.8	-1.97	*	2141.4	3.6	0.17
345	546	12.905H	35.707	2353.	2158.	7.1	1.00		*	614.0						
210	614	10.978	35.350	2329.	2185.	11.6	1.42	771.8	*	817.0	-45.2	-5.86	*	2175.9	9.1	0.42
211	684	10.141	35.288	2331.	2191.	13.3	1.49	779.8	*	838.5	-58.7	-7.53	*	2179.5	11.5	0.53
212	828	6.976	34.833	2313.	2214.	22.3	2.01	1043.9	*	1087.4	-43.5	-4.17	*	2208.1	5.9	0.27
213	903	6.905	34.925	2322.	2210.	21.4	1.89	974.4	*	1000.2	-25.8	-2.65	*	2206.1	3.9	0.17
347	991	6.221H	34.959	2325.	2204.	20.5	1.73		*	941.9						
214	1127	5.602	35.028	2321.	2181.	16.3	1.46	802.3	*	828.0	-25.7	-3.20	*	2176.0	5.0	0.23
348	1239	4.886H	35.014	2320.	2179.	16.2	1.38		*	821.1						
215	1373	4.607	35.016	2322.	2165.	14.9	1.29	747.3	*	742.6	4.7	0.63	*	2166.0	-1.0	-0.05
349	1537	4.192H	35.002	2319.	2163.	13.9	1.23		*	744.6						
216	1622	4.115	35.000	2317.	2163.	14.3	1.22	724.9	*	752.9	-28.0	-3.86	*	2156.9	6.1	0.28
140	1748	3.877H	34.993	2315.	2164.	14.6	1.21		*	765.6						
217	1869	3.762	34.989	2325.	2162.	15.6	1.22	716.1	*	716.2	-0.1	-0.01	*	2162.0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	26	20 47.3 N	62 16.0 W	26 4 81	

		MEASURED QUANTITIES							*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
141	1995	3.595H	34.982	2319.	2168.	17.0	1.24		*	768.5					
218	2244	3.317	34.970	2323.	2168.	20.4	1.25	719.6	*	751.9	-32.3	-4.49	2160.9	7.1	0.33
143	2495	3.057H	34.954	2329.	2172.	23.3	1.27		*	746.6					
219	2745	2.870	34.940	2339.	2178.	24.5	1.27	721.3	*	733.0	-11.7	-1.62	2175.4	2.6	0.12
144	2994	2.672H	34.926	2327.	2175.	27.9	1.32		*	769.5					
220	3243	2.540	34.919	2328.	2174.	27.6	1.27	722.5	*	759.6	-37.1	-5.14	2165.9	8.1	0.37
145	3490	2.433H	34.911	2327.	2170.	26.9	1.26		*	745.0					
221	3741	2.368	34.906	2333.	2167.	28.3	1.27	722.4	*	708.1	14.3	1.98	2170.3	-3.3	-0.15
146	3990	2.326H	34.901	2328.	2180.	29.5	1.29		*	788.3					
222	4234	2.307	34.898	2329.	2176.	31.3	1.28	730.5	*	765.2	-34.7	-4.75	2168.5	7.5	0.35
147	4490	2.291H	34.892	2337.	2182.	33.1	1.32		*	760.7					
223	4705	2.282	34.889	2346.	2179.	35.7	1.33	739.3	*	711.5	27.7	3.75	2185.3	-6.3	-0.29
148	4944	2.219H	34.875	2340.	2194.	41.6	1.41		*	808.0					
224	5094	2.133	34.864	2342.	2195.	48.3	1.48	769.0	*	805.3	-36.3	-4.72	2187.6	7.4	0.34
149	5395	2.009H	34.842	2352.	2210.	57.8	1.57		*	838.2					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-22.7	19.55
DELPCO2/PCO2	23	-4.3	3.67
DELTCO2	23	7.9	7.52
DELTCO2/TCO2	23	0.4	0.36

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	27	19 29.0 N	61 58.0 W	26 4 81	

	MEASURED QUANTITIES							*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
527	7	25.873	36.516			1.6	0.00	232.8	*							
529	16	25.813	36.504D					232.6	*							
528	19	25.817	36.500D					233.3	*							
530	31	25.619	36.511D					232.9	*							
531	42	25.502	36.507D					233.1	*							
532	47	25.315	36.514D					233.2	*							
533	51	25.113	36.566D					235.1	*							
534	62	24.806	36.609			1.4	0.00	235.4	*							
535	111	23.455	36.861			1.0	0.00	263.3	*							
536	148	20.520	36.794			1.0	0.05	336.7	*							

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	28	18 6.6 N	60 38.5 W	27 4 81	

	MEASURED QUANTITIES							*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
301	12	26.680	35.792	2358.	1994.	1.8	0.02	235.5	*	265.1	-29.6	-12.56	*	1967.0	27.0	1.35
302	80	25.949	36.670	2415.	2055.	1.4	0.02	236.7	*	291.1	-54.4	-22.99	*	2006.8	48.2	2.35
303	119	23.745	37.016	2430.	2076.	1.0	0.02	274.1	*	305.9	-31.8	-11.60	*	2050.7	25.3	1.22
304	153	21.049	36.866	2417.	2109.	1.1	0.06	332.1	*	370.6	-38.5	-11.59	*	2085.0	24.0	1.14
305	202	18.543	36.556	2399.	2103.	1.4	0.16	351.3	*	383.4	-32.1	-9.15	*	2084.3	18.7	0.89
306	251	17.227	36.373	2386.	2116.	2.5	0.38	400.9	*	428.9	-28.0	-6.99	*	2102.1	13.9	0.66
307	304	16.260	36.210	2379.	2133.	3.5	0.57	452.2	*	480.1	-27.9	-6.16	*	2121.2	11.8	0.55
308	452	11.466	35.389	2338.	2192.	10.6	1.39	759.6	*	811.2	-51.6	-6.79	*	2181.4	10.6	0.48
309	600	8.372	34.906	2317.	2215.	18.2	1.91	997.0	*	1067.4	-70.4	-7.06	*	2205.1	9.9	0.45
310	747	7.195	34.806	2320.	2225.	21.6	2.04	1057.2	*	1123.0	-65.8	-6.23	*	2216.3	8.7	0.39
311	897	6.316	34.776	2314.	2227.	24.5	2.14	1115.2	*	1185.5	-70.3	-6.30	*	2218.4	8.6	0.39
312	998	5.572	34.792	2321.	2223.	25.6	2.04	1047.2	*	1101.2	-54.0	-5.16	*	2215.7	7.3	0.33
313	1098	5.415	34.940	2325.	2203.	21.0	1.71	893.9	*	935.2	-41.3	-4.62	*	2196.2	6.8	0.31
314	1249	4.790	34.980	2335.	2201.	21.1	1.51	815.3*	*	869.0	-53.7	-6.59	*	2191.0	10.0	0.45
315	1499	4.380	35.004	2322.	2172.	15.2	1.28	741.2	*	775.2	-34.0	-4.59	*	2164.8	7.2	0.33
316	1746	4.021	34.998	2323.	2168.	13.9	1.21	720.0	*	751.2	-31.2	-4.34	*	2161.1	6.9	0.32
317	1994	3.738	34.987	2322.	2164.	15.5	1.22	714.2	*	736.9	-22.7	-3.18	*	2158.9	5.1	0.24
318	2494	3.229	34.961	2331.	2177.	19.4	1.23	714.6	*	760.1	-45.5	-6.37	*	2166.9	10.1	0.46
319	2993	2.800	34.936	2326.	2168.	23.6	1.24	716.3	*	739.5	-23.2	-3.24	*	2162.8	5.2	0.24
320	3490	2.517	34.916	2334.	2177.	25.8	1.25	718.8	*	747.9	-29.1	-4.05	*	2170.5	6.5	0.30
321	3888	2.369	34.905	2332.	2176.	28.1	1.26	722.7	*	752.5	-29.8	-4.12	*	2169.4	6.6	0.30
322	4289	2.309	34.897	2340.	2187.	32.0	1.30	729.9	*	770.9	-41.0	-5.62	*	2178.1	8.9	0.41
323	4685	2.272	34.889	2340.	2184.	36.1	1.35	737.7	*	757.8	-20.1	-2.73	*	2179.6	4.4	0.20
324	5131	2.102	34.860	2353.	2208.	50.2	1.50	773.0	*	822.1	-49.1	-6.35	*	2198.1	9.9	0.45

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-40.6	14.70
DELPCO2/PCO2	24	-7.0	4.20
DELTCO2	24	12.6	9.71
DELTCO2/TCO2	24	0.6	0.48

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	29	17 7.5 N	59 31.0 W	28 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	11	27.120	35.716	2355.	1993.	2.0	0.02	238.8	266.3	-27.5	-11.50	1968.3	24.7	1.24
102	42	27.270	35.948	2364.	1997.	1.8	0.06	244.3	264.3	-20.0	-8.20	1979.0	18.0	0.90
103	102	26.563	36.378	2394.	2050.	1.4	0.14	273.2	304.6	-31.4	-11.50	2025.4	24.6	1.20
104	134	24.909	36.548	2398.	2068.	1.9	0.22	298.6	327.6	-29.0	-9.71	2047.4	20.6	1.00
105	158	24.555	37.142	2439.	2077.	1.1	0.02	267.7	298.7	-31.0	-11.58	2051.5	25.5	1.23
106	210	20.577	36.851	2415.	2126.	1.9	0.20	377.2	404.9	-27.7	-7.35	2110.9	15.1	0.71
107	355	15.095	36.029	2369.	2158.	4.9	0.77	525.4	571.5	-46.1	-8.77	2142.4	15.6	0.72
108	450	11.231	35.267	2333.	2197.	12.2	1.51	811.6	861.3	-49.7	-6.12	2187.7	9.3	0.42
109	604	8.407	34.886	2321.	2224.	18.1	1.92	1016.4	1107.6	-91.2	-8.98	2211.6	12.4	0.56
110	750	7.219	34.835	2318.	2220.	21.8	2.02	1049.7	1098.3	-48.6	-4.63	2213.5	6.5	0.29
111	898	5.660	34.677	2320.	2239.	27.3	2.19	1128.2	1241.2	-113.0	-10.01	2225.6	13.4	0.60
112	999	5.504	34.757	2323.	2229.	27.1	2.12	1087.8	1133.9	-46.1	-4.24	2223.1	5.9	0.27
113	1199	5.550	34.956	2329.	2209.	20.8	1.68	883.1	950.6	-67.5	-7.65	2197.8	11.2	0.51
114	1398	4.894	35.017	2325.	2181.	16.3	1.36	768.9	808.1	-39.2	-5.09	2173.1	7.9	0.36
115	1548	4.512	35.013	2326.	2177.	15.0	1.27	739.5	782.5	-43.0	-5.82	2167.9	9.1	0.42
116	1796	3.968	34.996	2323.	2167.	14.9	1.22	717.6	746.9	-29.3	-4.08	2160.5	6.5	0.30
117	2287	3.243	34.965	2331.	2178.	19.9	1.23	714.3	765.4	-51.1	-7.15	2166.8	11.2	0.52
118	3033	2.569	34.921	2333.	2179.	27.7	1.28	721.7	762.3	-40.6	-5.63	2170.1	8.9	0.41
119	3780	2.292	34.901	2339.	2190.	31.0	1.28	728.1	789.4	-61.3	-8.42	2176.9	13.1	0.60
120	4283	2.246	34.891	2341.	2190.	35.0	1.32	734.0	781.7	-47.7	-6.50	2179.8	10.2	0.47
121	4777	2.095	34.864	2353.	2209.	48.8	1.48	770.2	826.8	-56.6	-7.35	2197.6	11.4	0.52
123	5614	1.949	34.833	2362.	2222.	63.0	1.63	810.1	855.5	-45.4	-5.60	2213.3	8.7	0.39
122	5259	1.945	34.838	2356.	2215.	60.5	1.61	801.5	846.6	-45.1	-5.63	2206.3	8.7	0.39
124	5974	1.988	34.832			64.0	1.65	813.5						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-47.3	20.64
DELPCO2/PCO2	23	-7.5	2.26
DELTCO2	23	13.0	5.84
DELTCO2/TCO2	23	0.6	0.30

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	30	16 26.0 N	57 37.6 W	29 4 81	

		MEASURED QUANTITIES						*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
270	10	27.150H	34.368					227.3	*							
101	12	27.184	34.373			2.6	0.02	227.9	*							
271	20	27.166H	34.369					229.4	*							
272	27	27.154H	34.369					227.3	*							
273	30	27.158H	34.371					228.4	*							
274	34	27.259H	34.551					227.8	*							
275	36	27.2 I	35.1 I					226.4	*							
276	40	27.118H	36.215					222.9	*							
277	50	26.947H	36.394					223.0	*							
102	54	27.014	36.321			1.8	0.01	223.3	*							
103	106	25.675	36.972			1.2	0.02	237.0	*							
104	140	24.232	37.236			0.9	0.02	283.8	*							
105	185	21.372	36.972			1.2	0.13	354.2	*							

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	31	15 43.0 N	55 47.7 W	29 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP ITS(ITO) (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	11	26.540	35.857	2365.	1982.	2.0	0.00	222.3	246.1	-23.8	-10.70	1958.4	23.6	1.19
103	116	23.728	37.127	2440.	2084.	1.1	0.00	275.9	306.8	-30.9	-11.20	2059.4	24.6	1.18
104	215	18.218	36.535	2396.	2117.	2.0	0.27	387.5	415.1	-27.6	-7.11	2102.7	14.3	0.68
107	330	14.046	35.800	2357.	2189.	7.2	1.11	657.6	723.4	-65.8	-10.01	2172.7	16.3	0.74
108	418	11.470	35.383	2334.	2188.	11.0	1.43	781.2	809.5	-28.3	-3.62	2182.3	5.7	0.26
110	574	9.220	35.068	2328.	2214.	16.2	1.74	919.4	990.8	-71.4	-7.77	2202.8	11.2	0.51
111	672	7.590	34.878			20.5	1.95	1022.5						
112	772	6.536	34.770	2317.	2220.	23.8	2.07	1081.8	1105.5	-23.7	-2.19	2216.9	3.1	0.14
115	967	5.545	34.782	2323.	2227.	26.3	2.04		1117.0					
118	1201	5.179	34.919	2326.	2203.	22.2	1.72	909.3	929.6	-20.3	-2.23	2199.7	3.3	0.15
119	1397	4.822	35.002	2329.	2187.	17.1	1.39	782.4	820.7	-38.3	-4.89	2179.4	7.6	0.35
122	1596	4.305	35.001	2325.	2174.	15.0	1.25	736.5	771.7	-35.2	-4.78	2166.5	7.5	0.35
124	1995	3.556	34.979	2331.	2173.	20.2	1.27	723.6	742.8	-19.2	-2.65	2168.7	4.3	0.20

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	11	-35.0	16.85
DELPCO2/PCO2	11	-6.1	3.27
DELTCO2	11	11.0	7.38
DELTCO2/TCO2	11	0.5	0.37

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	32	15 2.7 N	53 57.0 W	30 4 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	11	26.997	34.703	2297.	1939.	7.5	0.01		249.5					
540	14	26.817H	34.572	2300.	1931.	2.3	0.00	223.3	237.1	-13.8	-6.20	1917.5	13.5	0.70
202	70	26.217	36.709	2423.	2030.	1.7	0.02		254.8					
441	99	24.732H	37.163	2443.	2085.	1.2	0.02	276.6	305.2	-28.6	-10.35	2062.1	22.9	1.10
203	116	25.282	37.036	2440.	2057.	1.3	0.02		272.5					
204	151	21.632	36.946	2430.	2135.	1.8	0.19		399.6					
443	152	20.988H	36.900	2434.	2142.	1.9	0.20	379.2	405.9	-26.7	-7.05	2127.4	14.6	0.68
205	200	17.656	36.421	2395.	2150.	3.3	0.57		491.3					
444	253	15.411H	36.049		2214.	5.5	0.89	573.5						
206	301	13.495	35.724	2360.	2199.	8.2	1.24		755.2					
445	352	12.521H	35.564	2345.	2204.	9.7	1.38	792.6	844.8	-52.2	-6.58	2193.8	10.2	0.46
207	423	10.217	35.194	2331.	2211.	14.0	1.68		955.7					
543	500	9.020H	35.029	2331.	2216.	16.4	1.80	965.6	986.3	-20.7	-2.14	2212.8	3.2	0.14
208	574	7.860	34.875	2324.	2222.	19.5	1.97		1072.8					
447	749	6.393H	34.747	2318.	2233.	24.5	2.15	1137.6	1205.2	-67.6	-5.95	2224.9	8.1	0.36
209	820	5.784	34.711	2318.	2236.	26.8	2.20		1231.9					
547	896	5.509H	34.707	2321.	2234.	27.6	2.18	1123.4	1189.8	-66.4	-5.91	2225.9	8.1	0.36
210	996	5.341	34.788	2325.	2228.	26.6	2.07		1111.6					
544	1097	3.708H	34.860	2330.	2214.	24.5	1.92	993.2	978.5	14.7	1.48	2216.2	-2.2	-0.10
211	1195	5.096	34.916	2331.	2210.	22.7	1.77		945.2					
446	1296	4.971H	34.954	2333.	2200.	20.8	1.63	858.4	874.6	-16.2	-1.88	2197.1	2.9	0.13
212	1393	4.709	34.982	2331.	2198.	19.3	1.52		872.1					
448	1495	4.440H	34.992	2336.	2191.	18.3	1.42	782.2	809.7	-27.5	-3.51	2185.5	5.5	0.25
213	1619	4.187	34.992	2327.	2181.	17.5	1.36		799.0					
449	1744	3.934H	34.989	2330.	2177.	16.6	1.27	731.5	764.9	-33.4	-4.57	2169.8	7.2	0.33

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	DEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	32	15 2.7 N	53 57.0 W	30 4 81	

	MEASURED QUANTITIES									CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UP/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)		PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
215	1868	3.739	34.984	2331.	2176.	18.9	1.31		*	756.7					
545	1982	3.561H	34.982	2331.	2173.	18.4	1.25	718.7	*	742.3	-23.6	-3.28	2167.7	5.3	0.24
216	2240	3.198	34.960	2339.	2184.	21.2	1.27		*	760.7					
541	2472	2.988H	34.948	2335.	2179.	24.4	1.28	723.3	*	753.7	-30.4	-4.20	2172.3	6.7	0.31
218	2725	2.822	34.934	2346.	2194.	29.1	1.34		*	779.9					
219	2946	2.713	34.929	2341.	2189.	32.4	1.37		*	777.5					
548	2970	2.707H	34.931	2348.	2191.	31.8	1.35	734.6	*	757.2	-22.6	-3.08	2186.0	5.0	0.23
223	3101	2.649	34.921	2344.	2189.	32.8	1.36		*	764.8					
549	3471	2.523H	34.913	2344.	2190.	34.4	1.36	738.7	*	769.9	-31.2	-4.22	2183.3	6.7	0.31
224	3617	2.411	34.905	2346.	2194.	34.9	1.35		*	780.6					
340	3747	2.385H	34.902	2344.	2196.	33.9	1.34	726.9	*	798.5	-71.6	-9.85	2180.7	15.3	0.70
344	3993	2.342H	34.902	2347.	2190.	31.7	1.29	723.8	*	756.0	-32.2	-4.45	2182.8	7.2	0.33
348	4245	2.281H	34.893	2345.	2195.	34.6	1.30	736.3	*	788.5	-52.2	-7.09	2183.9	11.1	0.51
227	4375	2.263	34.889	2343.	2188.	36.7	1.35		*	764.2					
140	4520	2.232H	34.884	2350.	2198.	38.6	1.38	744.1	*	782.4	-38.3	-5.14	2189.8	8.2	0.37
141	4767	2.128H	34.866	2352.	2206.	47.5	1.47	765.4	*	815.6	-50.2	-6.56	2195.7	10.3	0.46
228	5042	1.936	34.839	2365.	2225.	59.2	1.60		*	857.3					
144	5003	1.943H	34.843	2358.	2219.	58.1	1.58	797.4	*	811.6	-14.2	-1.78	2216.2	2.8	0.13
149	5406	1.833H	34.822					827.3	*						
236	5417	1.844	34.823	2369.	2234.	67.1	1.69		*	888.5					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	21	-33.6	20.23
DELPCO2/PCO2	21	-4.9	2.67
DELTCO2	21	8.2	5.23
DELTCO2/TCO2	21	0.4	0.25

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	34	18 2.0 N	53 57.7 W	2 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	8	26.398	35.343	2339.	1967.	2.1	0.01	225.1	248.4	-23.3	-10.33	1944.6	22.4	1.14
202	71	25.101	37.127	2445.	2052.	1.2	0.01	237.9	263.0	-25.1	-10.53	2028.0	24.0	1.17
203	102	23.835	37.143			1.1	0.02	272.9						
204	146	21.828	37.082			1.1	0.03	321.7						
205	217	18.335	36.560	2402.	2127.	2.0	0.29	395.0	425.6	-30.6	-7.75	2111.5	15.5	0.73
206	217	17.272	36.385	2391.	2134.	2.7	0.46	429.7	459.9	-30.2	-7.03	2120.3	13.7	0.64
207	275	16.550	36.268	2383.	2141.	3.2	0.57	461.5	492.1	-30.6	-6.62	2128.4	12.6	0.59
208	346	14.954	36.014	2369.	2159.	4.9	0.81	534.3	574.7	-40.4	-7.56	2145.5	13.5	0.62
209	443	12.575	35.614	2348.	2193.	8.9	1.27	726.8	775.7	-48.9	-6.73	2182.3	10.7	0.49
210	541	10.703	35.367	2337.	2192.	12.2	1.46	792.9	817.0	-24.1	-3.04	2187.2	4.8	0.22
211	667	7.951	34.988	2326.	2220.	19.5	1.87	985.5	1046.1	-60.6	-6.15	2211.2	8.8	0.40
212	794	6.403	34.819	2323.	2222.	23.9	2.05	1066.2	1079.8	-13.6	-1.28	2220.2	1.8	0.08
213	952	5.465	34.812	2325.	2223.	25.3	2.00	1034.4	1072.7	-38.3	-3.70	2217.7	5.3	0.24
214	1158	5.205	34.942	2331.	2206.	21.4	1.70	893.1	920.2	-27.1	-3.04	2201.4	4.6	0.21
215	1360	4.787	34.993	2329.	2192.	18.2	1.48	804.0	848.0	-44.0	-5.48	2183.6	8.4	0.38
216	1565	4.318	35.001	2327.	2174.	15.6	1.30	743.4	763.8	-20.4	-2.74	2169.6	4.4	0.20
217	1770	3.901	34.994	2327.	2173.	15.8	1.23	720.7	758.5	-37.8	-5.25	2164.7	8.3	0.38
218	1975	3.566	34.981	2332.	2178.	19.8	1.27	722.4	761.8	-39.4	-5.45	2169.4	8.6	0.40
219	2468	3.034	34.953	2339.	2183.	26.6	1.31	729.0	756.8	-27.8	-3.81	2176.9	6.1	0.28
220	2951	2.720	34.929	2342.	2191.	31.6	1.35	728.7*	782.6	-53.9	-7.39	2179.4	11.6	0.53
221	3440	2.466	34.906	2346.	2194.	37.2	1.38	742.9	780.7	-37.8	-5.09	2185.9	8.1	0.37
222	3928	2.234	34.884	2350.	2202.	43.5	1.44	753.1	803.3	-50.2	-6.67	2191.5	10.5	0.47
223	4439	2.054	34.861	2355.	2208.	50.9	1.50	778.7	812.5	-33.8	-4.35	2201.1	6.9	0.31
224	4650	2.014	34.855	2354.	2207.	53.7	1.53	780.6*	812.8	-32.2	-4.12	2200.5	6.5	0.29

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-35.0	11.29
DELPCO2/PCO2	22	-5.6	2.29
DELTCO2	22	9.9	5.40
DELTCO2/TCO2	22	0.5	0.27

* DELTA PCO2 > 0.5 %

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	36	21 1.0 N	53 59.0 W	3 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	* PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
440	10	25.447H	36.599	2399.	2014.	1.4	0.01	234.0	* 257.1	-23.1	-9.87	* 1991.9	22.1	1.10
201	12	25.515	36.604	2399.	2014.	1.5	0.02		* 257.1					
203	61	24.221	36.890	2417.	2034.	1.3	0.01		* 265.6					
445	70	24.162H	36.827	2412.	2034.	1.3	0.00	245.4	* 269.7	-24.3	-9.90	* 2011.9	22.1	1.09
446	99	23.581H	37.145	2430.	2062.	1.1	0.00	262.8	* 288.7	-25.9	-9.84	* 2040.1	21.9	1.06
204	103	23.396	37.119	2430.	2066.	1.1	0.01		* 293.6					
444	159	19.993H	36.754	2409.	2100.	1.1	0.05	339.9	* 365.5	-25.6	-7.52	* 2084.2	15.8	0.75
205	197	18.763	36.589	2393.	2096.	1.4	0.11		* 379.7					
441	239	18.109H	36.529	2390.	2106.	1.4	0.20	369.6	* 402.7	-33.1	-8.94	* 2088.0	18.0	0.85
206	253	17.420	36.425	2381.	2098.	2.0	0.26		* 400.9					
448	318	16.953H	36.351	2378.	2103.	2.1	0.33	389.8	* 415.3	-25.5	-6.54	* 2089.9	13.1	0.62
207	365	16.007	36.200	2371.	2116.	3.1	0.48		* 455.1					
443	446	13.949H	35.874	2354.	2143.	5.0	0.77	531.9	* 563.1	-31.2	-5.87	* 2132.5	10.5	0.49
208	468	14.278	35.925	2355.	2138.	4.8	0.73		* 546.0					
209	510	13.381	35.798	2347.	2148.	5.8	0.87		* 598.1					
447	676	9.168H	35.223	2326.	2195.	15.0	1.56	833.8	* 885.0	-51.2	-6.13	* 2185.8	9.2	0.42
210	771	7.653	35.023	2320.	2204.	19.4	1.81		* 973.0					
211	833	6.900	34.965	2319.	2208.	21.2	1.87		* 1006.0					
449	893	6.309H	34.922	2318.	2210.	22.3	1.89	978.5	* 1026.1	-47.6	-4.87	* 2203.0	7.0	0.32
212	994	5.734	34.919	2316.	2201.	21.9	1.80		* 975.5					
340	1100	5.406H	34.965	2322.	2191.	19.9	1.62	868.9	* 879.2	-10.3	-1.18	* 2189.2	1.8	0.08
213	1172	5.201	34.985	2321.	2188.	19.1	1.55		* 866.6					
343	1303	4.873H	35.008	2320.	2180.	18.5	1.40	780.5*	* 826.1	-45.6	-5.85	* 2171.0	9.0	0.41
214	1364	4.691	35.011	2320.	2172.	15.9	1.36		* 785.2					
347	1497	4.418H	35.009	2319.	2167.	15.8	1.30		* 764.7					

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	36	21 1.0 N	53 59.0 W	3 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
215	1591	4.191	35.006	2326.	2168.	16.3	1.31		764.9					
344	1845	3.800H	35.000	2324.	2171.	19.5	1.29	731.1	762.7	-31.6	-4.32	2164.2	6.8	0.31
216	1973	3.549	34.990	2324.	2169.	21.8	1.31		753.9					
345	2243	3.225H	34.970	2330.	2175.	26.1	1.33	734.5	757.1	-22.6	-3.07	2170.1	4.9	0.23
217	2447	3.050	34.956	2332.	2179.	27.9	1.35		768.2					
341	2689	2.863H	34.940	2331.	2178.	30.0	1.34	734.3	767.1	-32.8	-4.47	2170.9	7.1	0.33
218	2925	2.758	34.932	2331.	2178.	30.7	1.35		767.4					
346	3187	2.624H	34.927	2332.	2178.	31.8	1.34	732.3	762.8	-30.5	-4.17	2171.4	6.6	0.30
219	3475	2.454	34.907	2336.	2183.	35.8	1.38		770.9					
348	3785	2.336H	34.898	2334.	2178.	34.4	1.33	736.2	754.6	-18.4	-2.50	2174.0	4.0	0.19
220	3899	2.312	34.897	2334.	2179.	34.6	1.34		759.0					
221	4199	2.253	34.890	2333.	2181.	36.1	1.34		773.5					
222	4290	2.220	34.884	2339.	2185.	39.3	1.39		767.1					
140	4354	2.209H	34.881	2340.	2189.	40.6	1.35	750.7	782.4	-31.7	-4.22	2182.3	6.7	0.31
223	4375	2.185	34.877	2341.	2193.	43.7	1.45		799.2					
224	4452	2.145	34.872	2341.	2193.	45.5	1.45		799.0					
228	4596	2.100	34.8660					760.3						
227	4602	2.104	34.866	2345.	2197.	47.6	1.48		801.8					
143	4652	2.079H	34.862	2346.	2199.	49.0	1.48	773.4	807.6	-34.2	-4.43	2192.0	7.0	0.32
229	4692	2.053	34.857	2345.	2200.	51.0	1.51		817.4					
231	4804	2.013	34.851	2346.	2202.	54.0	1.53		823.9					
236	4812	1.998	34.8510					784.3						
145	4948	1.998H	34.848	2349.	2207.	55.6	1.54	792.5	835.8	-43.3	-5.47	2198.5	8.5	0.39
149	5092	1.992H	34.846	2348.	2207.	56.9	1.56	798.7	841.0	-42.3	-5.30	2198.8	8.2	0.37

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	20	-31.5	10.10
DELPCO2/PCO2	20	-5.7	2.40
DELTCO2	20	10.5	6.05
DELTCO2/TCO2	20	0.5	0.30

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	38	23 50.6 N	54 2.5 W	5 5 81	

	MEASURED QUANTITIES									CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	11	24.585	37.203	2436.	2059.	1.3	0.01	251.8	*	279.6	-27.8	-11.04	2034.3	24.7	1.20
202	48	24.155	37.203	2441.	2055.	1.3	0.01	250.3	*	270.3	-20.0	-7.98	2036.8	18.2	0.89
203	106	23.263	37.304	2442.	2076.	1.2	0.01	270.7	*	295.7	-25.0	-9.23	2055.4	20.6	0.99
204	195	21.316	36.998	2423.	2109.	1.2	0.05	339.1	*	363.6	-24.5	-7.23	2093.6	15.4	0.73
205	273	18.041	36.506	2389.	2102.	1.9	0.20	366.3	*	396.3	-30.0	-8.20	2085.4	16.6	0.79
206	294	17.773	36.471	2382.	2094.	2.0	0.22	367.5	*	392.1	-24.6	-6.70	2080.4	13.6	0.65
207	355	17.080	36.368	2378.	2106.	2.2	0.32	389.7	*	421.5	-31.8	-8.16	2089.9	16.1	0.77
208	454	15.271	36.073	2365.	2128.	3.9	0.59	473.1	*	495.7	-22.6	-4.77	2119.0	9.0	0.42
209	568	13.130	35.765	2347.	2156.	6.3	0.89	581.1	*	625.7	-44.6	-7.68	2142.9	13.1	0.61
210	693	10.833	35.464	2333.	2175.	10.6	1.25	709.0	*	750.8	-41.8	-5.90	2165.6	9.4	0.43
211	842	8.554	35.202	2327.	2199.	16.1	1.58	841.9	*	903.2	-61.3	-7.28	2188.1	10.9	0.49
212	992	6.801	35.025	2324.	2197.	19.6	1.72	902.0	*	906.2	-4.2	-0.46	2196.3	0.7	0.03
213	1140	5.804	35.014	2319.	2193.	18.8	1.59	851.4	*	907.2	-55.8	-6.55	2183.3	9.7	0.44
214	1288	5.216	35.036	2321.	2182.	17.1	1.44	794.0	*	833.1	-39.1	-4.93	2174.4	7.6	0.35
215	1435	4.866	35.049	2323.	2179.	16.2	1.35	759.4	*	807.4	-48.0	-6.32	2169.2	9.8	0.45
216	1581	4.524	35.053	2321.	2168.	16.7	1.30	741.1	*	761.5	-20.4	-2.76	2163.6	4.4	0.20
217	1720	4.294	35.052	2325.	2174.	17.8	1.29	732.4	*	773.8	-41.4	-5.65	2165.1	8.9	0.41
218	1958	3.746	35.013	2332.	2175.	21.8	1.30	731.9	*	748.9	-17.0	-2.32	2171.3	3.7	0.17
219	2400	3.164	34.971	2332.	2183.	27.8	1.33	735.7	*	787.7	-52.0	-7.07	2172.0	11.0	0.51
220	2841	2.820	34.937	2338.	2184.	33.0	1.38	742.8	*	767.4	-24.6	-3.31	2178.7	5.3	0.24
221	3293	2.538	34.914	2338.	2189.	37.6	1.39	746.4	*	791.2	-44.8	-6.00	2179.6	9.4	0.43
222	3747	2.298	34.8930	2344.	2189.	41.5	1.42	751.8	*	766.0	-14.2	-1.88	2186.0	3.0	0.14
223	4152	2.175	34.878		2192.	45.0	1.45	760.3	*						
224	4555	2.102	34.865	2345.	2202.	49.9	1.50	773.5	*	827.4	-53.9	-6.97	2191.2	10.8	0.49
227	4966	2.051	34.853	2347.	2207.	54.0	1.54	786.3	*	845.6	-59.3	-7.54	2195.4	11.6	0.52

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	SIN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	3R	23 50.6 N	54 2.5 W	5 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
228	5360	2.049	34.847	2352.	2207.	56.2	1.55	794.4	822.5	-28.1	-3.54	2201.4	5.6	0.25
229	5595	2.078	34.847	2348.	2208.	56.4	1.56	795.0	846.8	-51.8	-6.51	2198.0	10.0	0.45
236	5698	2.092	34.848	2346.	2200.	56.3	1.56	795.3	813.7	-18.4	-2.31	2196.3	3.7	0.17

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	27	-34.3	15.19
DELPCO2/PCO2	27	-5.9	2.45
DELTCO2	27	10.5	5.53
DELTCO2/TCO2	27	0.5	0.27

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	39	25 21.3 N	55 54.0 W	6 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
370	5	23.874H	36.789					252.2						
371	10	23.836H	36.880					253.0						
440	10	23.8 I	36.913	2420.	2048.	1.2	0.01	255.4	279.4	-24.0	-9.39	2027.1	20.9	1.02
201	11	23.816	36.888	2410.	2036.	1.5	0.02		274.4					
372	14	23.825H	36.892					253.4						
373	16	23.806H	36.893					253.1						
374	20	23.780H	36.894					253.4						
375	23	23.609H	36.885					253.9						
376	26	23.081H	36.888					256.1						
377	31	22.999H	36.932					257.1						
202	68	22.554	37.021	2418.	2057.	1.4	0.01		293.5					
445	100	21.9 I	36.956	2415.	2055.	1.0	0.01	270.5	293.4	-22.9	-8.46	2036.3	18.7	0.91
203	147	20.926	36.850	2404.	2079.	1.2	0.03		338.9					
204	246	18.323	36.539	2385.	2098.	1.9	0.20		395.7					
447	250	18.3 I	36.527	2386.	2096.	1.6	0.20	363.0	390.0	-27.0	-7.43	2080.9	15.1	0.72
205	297	17.763	36.468	2380.	2094.	2.0	0.24		395.1					
206	347	17.265	36.402	2376.	2100.	2.1	0.30		413.0					
441	399	16.6 I	36.258	2373.	2116.	2.7	0.43	421.7	451.8	-30.1	-7.13	2102.2	13.8	0.65
207	447	15.914	36.182	2367.	2114.	3.2	0.49		457.9					
208	546	13.982	35.861	2350.	2128.	5.0	0.72		528.4					
444	598	13.2 I	35.795	2344.	2139.	5.9	0.83	554.8	576.9	-22.1	-3.99	2131.9	7.1	0.33
210	747	10.630	35.2410	2323.	2182.	14.6	1.47		827.8					
448	798	9.498H	35.267	2322.	2183.	14.0	1.48	802.8	838.6	-35.8	-4.46	2176.1	6.9	0.31
211	896	8.027	35.109	2320.	2190.	17.3	1.67		886.7					
212	995	6.949	35.020	2316.	2190.	19.3	1.73		907.5					

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	39	25 21.3 N	55 54.0 W	6 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
443	998	6.921H	35.018	2317.	2197.	19.2	1.72	899.5	944.9	-45.4	-5.05	2189.6	7.4	0.34
213	1094	6.378	35.039	2318.	2190.	18.0	1.59		895.3					
214	1191	5.899	35.084	2319.	2177.	16.0	1.44		817.4					
446	1247	5.687H	35.083	2318.	2176.	15.4	1.39	780.7	815.8	-35.1	-4.49	2169.1	6.9	0.32
215	1291	5.477	35.082	2317.	2173.	15.6	1.38		804.9					
216	1389	5.117	35.089	2318.	2169.	15.2	1.32		780.2					
449	1496	4.912H	35.092	2320.	2173.	15.7	1.30	743.0	791.0	-48.0	-6.46	2163.0	10.0	0.46
217	1588	4.631	35.085	2323.	2171.	16.9	1.29		768.3					
140	1686	4.392H	35.069	2327.	2172.	17.2	1.28	729.5	755.9	-26.4	-3.62	2166.2	5.8	0.27
218	1812	4.093	35.048	2321.	2168.	18.9	1.28		761.7					
145	1934	3.886H	35.032	2325.	2175.	20.0	1.28	726.0	778.2	-52.2	-7.18	2163.8	11.2	0.52
219	2085	3.586	35.006	2325.	2171.	22.8	1.30		758.9					
220	2567	3.019	34.958	2331.	2175.	29.3	1.34		753.6					
147	2579	3.045H	34.959	2332.	2183.	29.4	1.35	735.7	787.3	-51.6	-7.01	2172.1	10.9	0.50
221	3058	2.737	34.933	2332.	2180.	33.9	1.37		773.3					
141	3226	2.649H	34.924	2335.	2186.	34.8	1.38	740.5	789.9	-49.4	-6.67	2175.6	10.4	0.48
144	3326	2.589H	34.919	2334.	2185.	35.4	1.37	739.3	788.9	-49.6	-6.71	2174.5	10.5	0.48
222	35450	2.483	34.9870	2333.0		32.6	1.32							
223	4049	2.309	34.892	2334.	2183.	39.5	1.40		779.8					
148	4325	2.230H	34.881	2336.	2190.	42.9	1.43	756.7	806.1	-49.4	-6.53	2179.8	10.2	0.46
224	4548	2.203	34.877	2335.	2187.	44.0	1.44		795.9					
143	4825	2.108H	34.862	2343.	2199.	50.5	1.50	777.8	821.8	-44.0	-5.65	2190.2	8.8	0.40
227	5065	2.067	34.855	2343.	2199.	53.7	1.52	784.2	822.0	-37.8	-4.82	2191.5	7.5	0.34
146	5325	2.052H	34.848	2343.	2203.	55.9	1.54	794.5	843.2	-48.7	-6.13	2193.6	9.4	0.43
228	5344	2.051	34.848	2344.	2203.	56.2	1.56		838.6					

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	39	25 21.3 N	55 54.0 W	6 5 81	

	MEASURED QUANTITIES								*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
236	5586	2.073	34.847	2346.	2203.	56.8	1.55		*	829.7						
149	5824	2.100H	34.845	2345.	2206.	56.9	1.56	797.0	*	850.6	-53.6	-6.73	*	2195.7	10.3	0.47

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	19	-39.6	10.97
DELPCO2/PCO2	19	-6.2	1.47
DELTCO2	19	10.6	3.92
DELTCO2/TCO2	19	0.5	0.20

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	40	27 29.5 N	58 35.1 W	7 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	7	23.234	36.654	2398.	2050.	1.2	0.01		302.3					
440	10	21.469	36.622					287.3						
203	91	19.170	36.606	2393.	2080.	1.2	0.05		352.4					
445	102	19.014H	36.598			1.4	0.05	315.7						
204	168	18.535	36.552	2394.	2083.	1.2	0.06		355.6					
205	242	17.977	36.496	2386.	2094.	1.9	0.19		386.1					
447	249	17.992H	36.498	2389.	2089.	1.9	0.20	350.7	372.7	-22.0	-6.27	2076.0	13.0	0.62
206	313	17.569	36.454	2389.	2105.	2.0	0.22		402.0					
441	404	16.919H	36.341	2377.	2105.	2.6	0.33	389.5	421.3	-31.8	-8.16	2088.9	16.1	0.77
207	413	16.742	36.306	2379.	2114.	2.8	0.38		436.2					
208	528	14.739	35.970	2364.	2137.	4.6	0.66		521.1					
444	601	13.568H	35.795			6.0	0.83	546.9						
209	649	12.580	35.651	2345.	2158.	7.4	0.98		637.9					
210	749	10.489	35.378	2338.	2184.	11.6	1.32		771.9					
211	798	9.515	35.268	2328.	2188.	13.7	1.44		835.6					
340	798	9.463H	35.262	2333.	2189.	13.8	1.44	786.2	817.5	-31.3	-3.98	2182.8	6.2	0.28
212	823	9.245	35.127D	2330.	2198.	16.3	1.57		880.1					
345	996	6.699H	35.085	2338.	2191.	16.8	1.51	826.6	803.0	23.6	2.85	2195.6	-4.6	-0.21
213	997	6.797	35.089	2326.	2196.	16.9	1.53		888.4					
214	1119	5.876	35.063	2324.	2191.	16.3	1.45		868.4					
347	1245	5.514H	35.115	2329.	2177.	14.7	1.31	753.8	772.0	-18.2	-2.41	2173.2	3.8	0.18
215	1247	5.487	35.115	2326.	2181.	14.5	1.30		804.9					
216	1444	4.925	35.100	2324.	2177.	14.3	1.23		792.7					
341	1497	4.706H	35.087	2325.	2170.	14.9	1.24	730.9	754.4	-23.5	-3.22	2164.9	5.1	0.24
217	1631	4.464	35.074	2326.	2176.	16.3	1.26		778.9					

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TID	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	40	27 29.5 N	58 35.1 W	7 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
344	1744	4.149H	35.054	2327.	2174.	17.8	1.25	727.3	764.9	-37.6	-5.17	2165.8	8.2	0.38
218	1805	4.046	35.043	2327.	2180.	18.4	1.26		794.0					
348	1994	3.678H	35.014	2330.	2175.	21.3	1.27	729.5	756.8	-27.3	-3.74	2169.0	6.0	0.27
219	2042	3.609	35.007	2330.	2178.	21.8	1.28		771.2					
220	2433	3.185	34.974	2329.	2179.	26.0	1.31		780.2					
343	2744	2.897H	34.948	2335.	2178.	29.5	1.33	732.6	750.2	-17.6	-2.40	2174.1	3.9	0.18
221	2917	2.813	34.939	2335.	2182.	30.2	1.34		769.8					
222	3392	2.533	34.914	2345.	2190.	34.6	1.36		765.2					
346	3495	2.482H	34.911			35.9	1.36	740.1						
349	3796	2.349H	34.898	2335.	2183.	38.3	1.38		775.1					
223	3901	2.310	34.892	2343.	2191.	39.8	1.40		779.9					
140	4046	2.272H	34.888	2352.	2194.	40.9	1.41	742.7	756.5	-13.8	-1.86	2191.0	3.0	0.14
145	4346	2.196H	34.878	2345.	2196.	44.4	1.44		795.8					
224	4405	2.186	34.875	2342.	2197.	45.2	1.45		815.1					
147	4644	2.135H	34.867	2343.	2199.	48.8	1.49	765.4	820.8	-55.4	-7.24	2187.8	11.2	0.51
141	4893	2.094H	34.859	2346.	2207.	51.8	1.51		849.7					
227	4918	2.087	34.858	2347.	2199.	52.0	1.51		803.9					
144	5143	2.064H	34.853	2352.	2210.	54.3	1.54	784.5	837.8	-53.3	-6.79	2199.5	10.5	0.48
148	5393	2.061H	34.848	2353.	2212.	55.9	1.55		843.5					
228	5422	2.064	34.848	2358.	2214.	56.0	1.56		830.6					
143	5641	2.079H	34.846	2351.	2213.	56.7	1.56	794.2	858.9	-64.7	-8.14	2200.6	12.4	0.56
229	5671	2.085	34.847	2353.	2209.	56.8	1.57		828.6					
230	5823	2.105	34.847	2350.	2206.	56.9	1.56		826.8					
146	5890	2.110H	34.845	2352.	2217.	56.8	1.55		876.5					
149	6138	2.149H	34.847	2353.	2212.	56.7	1.56	796.1	844.3	-48.2	-6.05	2202.6	9.4	0.42

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	40	27 29.5 N	58 35.1 W	7 5 81	

		MEASURED QUANTITIES					*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	14	-30.1	21.25
DELPCO2/PCO2	14	-4.5	2.90
DELTCO2	14	7.5	5.06
DELTCO2/TCO2	14	0.3	0.24

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	41	29 43.0 N	61 18.0 W	9 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	13	21.352	36.632	2396.	2059.	0.9	0.00	291.7	316.7	-25.0	-8.56	2040.6	18.4	0.89
102	55	19.916	36.640	2396.	2058.	0.9	0.00	289.8	315.4	-25.6	-8.83	2039.0	19.0	0.92
103	103	18.789	36.590	2393.	2068.	1.0	0.00	301.4	333.3	-31.9	-10.58	2045.7	22.3	1.08
104	153	18.455	36.577	2391.	2078.	1.2	0.05	318.3	351.6	-33.3	-10.48	2056.2	21.8	1.05
105	278	18.203	36.559	2390.	2078.	1.3	0.06	322.1	352.7	-30.6	-9.51	2058.2	19.8	0.95
106	402	17.585	36.454	2383.	2094.	2.0	0.21	359.2	390.5	-31.3	-8.70	2076.4	17.6	0.84
107	502	16.468	36.261	2372.	2116.	3.0	0.41	413.9	453.6	-39.7	-9.59	2097.6	18.4	0.87
108	599	14.567	35.937	2355.	2133.	4.9	0.69	496.4	531.0	-34.6	-6.98	2120.3	12.7	0.60
109	699	12.606	35.642	2341.	2156.	7.6	0.98	591.4	643.6	-52.2	-8.83	2141.2	14.8	0.69
110	800	10.586	35.390	2332.	2175.	11.2	1.27	708.7	753.9	-45.2	-6.38	2164.8	10.2	0.47
111	949	7.979	35.105	2322.	2187.	14.5	1.45	802.4	858.1	-55.7	-6.94	2176.5	10.5	0.48
112	1098	6.125	35.088	2321.	2179.	14.9	1.38	788.8	817.7	-28.9	-3.67	2173.3	5.7	0.26
113	1247	5.532	35.107	2322.	2179.	14.9	1.32	756.5	812.7	-56.2	-7.44	2167.6	11.4	0.52
114	1447	4.952	35.093	2323.	2170.	14.0	1.23	731.4	762.5	-31.1	-4.25	2163.3	6.7	0.31
115	1646	4.492	35.072	2323.	2171.	15.1	1.22	723.3	767.1	-43.8	-6.06	2161.5	9.5	0.44
116	1846	4.104	35.045	2324.	2169.	16.9	1.24	720.9	753.3	-32.4	-4.50	2161.8	7.2	0.33
117	2043	3.721	35.013	2323.	2169.	19.5	1.24	723.3	757.3	-34.0	-4.70	2161.5	7.5	0.34
118	2488	3.217	34.973	2331.	2175.	25.1	1.30	727.3	753.0	-25.7	-3.53	2169.3	5.7	0.26
119	2989	2.881	34.949	2329.	2177.	28.6	1.32	728.1	770.8	-42.7	-5.87	2167.8	9.2	0.42
120	3490	2.565	34.919	2329.	2174.	29.1	1.30	724.7	755.9	-31.2	-4.31	2167.1	6.9	0.32
121	3989	2.349	34.901	2327.	2176.	31.6	1.30	731.5	773.5	-42.0	-5.74	2167.0	9.0	0.41
248	4346	2.297R	34.894	2332.	2178.	33.5	1.32		762.8					
122	4486	2.277	34.891	2333.	2180.	34.3	1.33	740.1	767.8	-27.7	-3.75	2174.0	6.0	0.27
243	4743	2.247R	34.883	2334.	2184.	37.8	1.36		783.7					
123	4978	2.204	34.874	2338.	2193.	43.0	1.42	760.0	811.8	-51.8	-6.82	2182.4	10.6	0.48

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	2	41	29 43.0 N	61 18.0 W	9 5 81	

		MEASURED QUANTITIES							*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
246	5040	2.154R	34.866	2341.	2194.	46.6	1.46		*	804.3					
124	5326	2.130	34.859	2344.	2197.	50.5	1.50	777.0	*	806.5	-29.5	-3.80	2191.0	6.0	0.27

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-36.8	9.52
DELPCO2/PCO2	24	-6.7	2.25
DELTCO2	24	12.0	5.46
DELTCO2/TCO2	24	0.6	0.27

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	42	32 0.6 N	56 11.3 W	18 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	6	21.502	36.340	2377.	2043.	1.2	0.02	294.6	313.3	-19.3	-6.56	2028.9	14.1	0.69
102	96	18.462	36.511	2390.	2071.	1.4	0.09	319.2	341.1	-21.9	-6.88	2056.4	14.6	0.70
103	202	18.094	36.505	2383.	2073.	1.5	0.11	324.8	353.7	-28.9	-8.89	2054.5	18.5	0.89
104	301	17.922	36.492	2388.	2076.	1.8	0.15	334.5	351.9	-17.4	-5.21	2065.0	11.0	0.53
105	400	17.394	36.423	2385.	2091.	2.3	0.28	366.4	381.7	-15.3	-4.18	2082.3	8.7	0.41
106	501	16.315	36.236	2378.	2109.	3.3	0.46	415.1	427.1	-12.0	-2.89	2103.2	5.8	0.27
107	601	14.812	35.987	2353.	2114.	4.6	0.63	472.2	485.3	-13.1	-2.78	2108.7	5.3	0.25
108	697	13.187	35.723	2345.	2135.	6.4	0.86	539.9	560.9	-21.0	-3.90	2128.0	7.0	0.33
109	804	10.982	35.428	2327.	2166.	10.6	1.23	678.7	733.0	-54.3	-8.01	2153.2	12.8	0.59
110	906	8.898	35.217	2324.	2177.	13.6	1.43	778.8	796.3	-17.5	-2.25	2173.5	3.5	0.16
111	1006	7.263	35.151	2320.	2177.	14.1	1.40	785.1	813.2	-28.1	-3.58	2171.4	5.6	0.26
112	1106	6.646	35.172	2326.	2178.	13.9	1.35	767.0	790.9	-23.9	-3.11	2173.1	4.9	0.22
113	1255	5.632	35.106	2317.	2170.	13.4	1.29	753.7	789.2	-35.5	-4.71	2162.6	7.4	0.34
114	1509	4.845	35.077	2321.	2163.	13.4	1.23	727.5	737.9	-10.4	-1.43	2160.7	2.3	0.11
115	1758	4.317	35.038	2311.	2160.	14.2	1.22	722.5	764.4	-41.9	-5.80	2150.9	9.1	0.42
116	2008	4.000	35.032	2322.	2164.	17.4	1.26	722.3	738.4	-16.1	-2.22	2160.4	3.6	0.17
117	2256	3.584	34.993	2317.	2163.	18.9	1.25	721.3	753.4	-32.1	-4.45	2155.9	7.1	0.33
118	2509	3.316	34.973	2324.	2165.	21.3	1.27	721.0	734.8	-13.8	-1.92	2161.9	3.1	0.14
119	3005	2.955	34.947	2320.	2166.	25.9	1.31	725.0	756.1	-31.1	-4.29	2159.2	6.8	0.31
120	3508	2.586	34.921	2326.	2171.	27.0	1.28	721.4	753.8	-32.4	-4.50	2163.8	7.2	0.33
121	4002	2.357	34.902	2323.	2168.	31.2	1.31	730.6	752.9	-22.3	-3.05	2163.1	4.9	0.22
122	4491	2.263	34.889	2332.	2183.	36.2	1.36	742.2	787.2	-45.0	-6.07	2173.5	9.5	0.44
123	5002	2.159	34.871	2338.	2193.	46.6	1.48	768.0	813.0	-45.0	-5.86	2183.9	9.1	0.42
136	5292	2.138	34.8610	2342.	2197.	50.2	1.51	774.3	815.6	-41.3	-5.33	2188.7	8.3	0.38
135	5419	2.145	34.8610					778.4						

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	42	32 0.6 N	56 11.3 W	18 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
134	5468	2.146	34.861D					779.3						
132	5528	2.150	34.860D					779.3						
126	5563	2.152	34.860	2345.	2204.	52.1	1.53		839.2					

STATION STATISTICS

	N	MEAN	SIGMA
DELTCO2	24	-26.7	11.95
DELPCO2/PCO2	24	-4.5	1.89
DELTCO2	24	7.9	3.90
DELTCO2/TCO2	24	0.4	0.19

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	43	31 45.5 N	50 44.6 W	18 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
348	2	21.386H	36.452	2393.	2055.	2.8	0.04		*	313.4						
401	10	21.386	36.453	2389.	2057.	1.2	0.04	302.5	*	320.5	-18.0	-5.95	*	2044.2	12.8	0.62
347	101	18.111H	36.510	2391.	2071.	2.7	0.08		*	340.0						
340	253	17.2 1	36.448	2393.	2096.	3.4	0.24		*	378.8						
345	401	16.362H	36.249	2375.	2110.	4.5	0.44		*	434.8						
402	405	16.345	36.244	2374.	2105.	3.4	0.44	411.5	*	425.5	-14.0	-3.41	*	2098.2	6.8	0.32
343	502	14.664H	35.960	2364.	2125.	5.8	0.66		*	489.2						
403	600	13.002	35.696	2350.	2140.	7.0	0.90	555.1	*	562.6	-7.5	-1.35	*	2137.6	2.4	0.11
349	702	11.104H	35.453	2338.	2162.	10.8	1.18		*	675.4						
404	794	9.492	35.288	2326.	2171.	12.7	1.36	746.6	*	759.2	-12.6	-1.69	*	2168.3	2.7	0.13
246	896	8.2 1	35.212	2325.	2180.	14.9	1.42	781.21	*	806.7	-25.5	-3.26	*	2174.9	5.1	0.23
405	994	6.940	35.161	2329.	2179.	14.7	1.41	763.0	*	782.9	0.1	0.01	*	2179.0	0.0	0.00
244	996	6.926H	35.181	2327.	2181.	15.5	1.40	780.6	*	802.5	-21.9	-2.81	*	2176.6	4.4	0.20
241	1194	6.034H	35.206	2334.	2170.	14.9	1.30	742.6	*	720.7	21.9	2.95	*	2174.9	-4.9	-0.23
406	1195	5.766	35.145	2321.	2169.	14.3	1.32	751.6	*	768.3	-16.7	-2.22	*	2165.5	3.5	0.16
407	1296	5.342	35.121	2326.	2168.	13.7	1.26	737.3	*	741.6	-4.3	-0.59	*	2167.0	1.0	0.04
408	1400	5.081	35.116	2326.	2174.	14.2	1.25	731.0	*	769.8	-38.8	-5.30	*	2165.6	8.4	0.38
243	1497	4.973H	35.127	2328.	2169.	15.6	1.26	729.2	*	738.3	-9.1	-1.25	*	2167.0	2.0	0.09
409	1502	4.891	35.112	2326.	2166.	14.7	1.25	724.6	*	732.3	-7.7	-1.06	*	2164.3	1.7	0.08
410	1601	4.500	35.068	2319.	2165.	14.5	1.22	723.5	*	755.0	-31.5	-4.36	*	2158.1	6.9	0.32
411	1703	4.383	35.070	2327.	2163.	15.6	1.23	720.3	*	714.7	5.6	0.78	*	2164.3	-1.3	-0.06
412	1803	4.164	35.051	2326.	2164.	16.5	1.24	721.7	*	722.4	-0.7	-0.10	*	2163.8	0.2	0.01
245	1991	3.851H	35.024	2330.	2166.	19.5	1.27	724.3	*	716.3	8.0	1.11	*	2167.8	-1.8	-0.08
413	2003	3.819	35.020	2328.	2165.	18.9	1.26	722.9	*	719.5	3.4	0.47	*	2165.8	-0.8	-0.04
240	2491	3.267H	34.978	2328.	2171.	25.4	1.32	731.2	*	746.5	-15.3	-2.09	*	2167.6	3.4	0.16

SiO2
15.6
16.5
19.6
18.9
25.4

T QUESTIONABLE DUE TO THERMAL DISEQUILIBRIUM

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	43	31 45.5 N	50 44.6 W	18 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)	ΣO2
414	2503	3.260	34.975	2330.	2175.	24.9	1.30	728.0	757.1	-29.1	-4.00	2168.6	6.4	0.29	25.9
140	2916	2.944H	34.950	2326.	2165.	30.3	1.35	730.7	728.1	2.6	0.35	2165.6	-0.6	-0.03	30.3
415	3004	2.884	34.944	2336.	2175.	29.7	1.34	732.5	732.7	-0.2	-0.03	2175.0	0.0	0.00	29.7
143	3431	2.622H	34.922	2335.	2174.	31.9	1.35	726.3	732.8	-6.5	-0.90	2172.5	1.5	0.07	31.9
416	3503	2.562	34.918	2335.	2174.	31.1	1.33	729.2	732.1	-2.9	-0.40	2173.3	0.7	0.03	31.1
417	3868	2.356	34.900	2337.	2177.	36.0	1.38	738.3	738.5	-0.2	-0.03	2177.0	0.0	0.00	36.0
145	3924	2.333H	34.898			36.5	1.38	738.9							
418	4155	2.252	34.889	2339.	2180.	38.7	1.40	744.1	744.3	-0.2	-0.02	2180.0	0.0	0.00	38.7
419	4297	2.212	34.884	2342.	2182.	41.2	1.42	750.8	741.4	9.4	1.25	2184.1	-2.1	-0.09	41.2
420	4338	2.196	34.881	2340.	2182.	42.1	1.43	751.3	750.2	1.1	0.15	2182.2	-0.2	-0.01	42.1
146	4430	2.162H	34.876	2341.	2189.	44.6	1.47	758.4	779.3	-20.9	-2.76	2184.6	4.4	0.20	44.5
421	4452	2.161	34.875	2343.	2186.	44.5	1.46	757.7	757.1	0.6	0.08	2186.1	-0.1	-0.01	44.5
422	4873	2.137	34.866	2342.	2194.	48.8	1.50	768.3	800.5	-32.2	-4.20	2187.4	6.6	0.30	48.8
147	4932	2.141H	34.865	2340.	2189.	49.0	1.51	769.3	784.3	-15.0	-1.94	2185.9	3.1	0.14	49.0
148	5231	2.167H	34.864			50.0	1.53	775.2							
423	5244	2.159	34.863	2350.	2192.	50.1	1.51	772.4	756.5	15.9	2.06	2195.4	-3.4	-0.15	50.2

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	33	-7.9	14.02
DELPCO2/PCO2	33	-1.2	2.08
DELTCO2	33	2.1	3.64
DELTCO2/TCO2	33	0.1	0.17

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	44	33 0.3 N	41 29.2 W	22 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	15	19.626	36.533	2401.	2065.	1.0	0.05	303.2	318.9	-15.7	-5.16	2053.8	11.2	0.54
102	103	17.571	36.420	2393.	2080.	1.6	0.15		351.1					
103	206	17.186	36.388	2389.	2087.	1.8	0.19	345.1	368.1	-23.0	-6.65	2073.2	13.8	0.66
104	406	14.297	35.908	2354.	2126.	4.7	0.64	475.0	513.3	-38.3	-8.07	2111.2	14.8	0.70
105	507	12.938	35.711	2351.	2131.	5.9	0.80	526.3	532.7	-6.4	-1.21	2128.8	2.2	0.11
106	608	11.302	35.496	2337.	2155.	8.5	1.05	616.3	651.0	-34.7	-5.63	2145.5	9.5	0.44
107	708	10.045	35.367	2338.	2165.	10.6	1.23	693.0	686.8	6.2	0.89	2166.5	-1.5	-0.07
108	809	8.560	35.291	2330.	2176.	12.5	1.33	742.9	765.7	-22.8	-3.07	2171.1	4.9	0.23
109	910	7.646	35.289	2339.	2177.	13.1	1.33	745.7	733.7	12.0	1.60	2179.7	-2.7	-0.12
110	1010	7.383	35.340	2334.	2177.	12.7	1.26	727.3	753.9	-26.6	-3.66	2171.1	5.9	0.27
111	1110	6.649	35.296	2338.	2173.	12.8	1.23	724.0	719.5	4.5	0.62	2174.0	-1.0	-0.05
112	1211	5.919	35.215	2329.	2170.	12.9	1.23	725.7	739.9	-14.2	-1.95	2166.8	3.2	0.15
113	1312	5.351	35.161	2331.	2166.	13.1	1.23	724.15	713.2	10.9	1.50	2168.5	-2.5	-0.12
114	1411	4.989	35.119	2328.	2170.	13.6	1.22	721.5	742.4	-20.9	-2.89	2165.3	4.7	0.21
115	1512	4.546	35.069	2326.	2161.	13.8	1.21	722.0	709.5	12.5	1.74	2163.9	-2.9	-0.13
116	1611	4.441	35.069	2321.	2163.	14.7	1.23	719.4	738.2	-18.8	-2.61	2158.8	4.2	0.19
117	1809	4.064	35.038	2326.	2162.	16.4	1.23	721.9	713.3	8.6	1.19	2164.0	-2.0	-0.09
118	2008	3.758	35.010	2323.	2165.	18.5	1.25	720.4	738.8	-18.4	-2.55	2160.9	4.1	0.19
119	2207	3.538	34.994	2329.	2164.	20.6	1.26	723.1	710.9	12.2	1.68	2166.8	-2.8	-0.13
120	2404	3.331	34.977			22.9	1.28	723.7						
121	2594	3.145	34.963	2335.	2169.	24.9	1.30	726.2	709.6	16.6	2.29	2172.8	-3.8	-0.18
122	2794	3.003	34.952	2330.	2171.	26.6	1.32	727.4	738.4	-11.0	-1.51	2168.5	2.5	0.11
123	3044	2.853	34.940	2336.	2172.	28.2	1.32	731.6	719.1	12.5	1.70	2174.8	-2.8	-0.13
126	3292	2.675	34.928	2330.	2173.	31.0	1.33	734.1	748.0	-13.9	-1.90	2169.9	3.1	0.14
130	3465	2.554	34.916	2331.	2175.	31.6	1.35	741.4	752.6	-11.2	-1.51	2172.6	2.4	0.11

S SINGLE ANALYSIS

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIC	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	44	33 0.3 N	41 29.2 W	22 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
126	3570	2.564	34.918	2331.	2174.	31.5	1.35	733.5	748.4	-14.9	-2.04	2170.7	3.3	0.15

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-8.1	16.14
DELPCO2/PCO2	24	-1.5	2.84
DELTCO2	24	2.8	5.23
DELTCO2/TCO2	24	0.1	0.25

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	45	33 31.5 N	35 59.8 W	23 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
340	2	20.487H	36.488	2387.	2064.	0.8	0.03	310.5	333.9	-23.4	-7.52	2048.0	16.0	0.77
201	11	20.361	36.476	2389.	2072.	0.8	0.03	312.5	343.4	-30.9	-9.90	2051.3	20.7	1.00
341	201	16.353H	36.232	2372.	2104.	2.5	0.35	396.3	426.7	-30.4	-7.66	2088.9	15.1	0.72
202	210	16.444	36.245	2373.	2105.	2.5	0.34	390.0	427.1	-37.1	-9.52	2086.4	18.6	0.88
342	303	14.642H	35.974	2356.	2113.	3.6	0.56	449.8	475.6	-25.8	-5.73	2102.1	10.9	0.51
203	309	14.597	35.969	2357.	2122.	3.9	0.56	452.9	496.3	-43.4	-9.58	2104.3	17.7	0.83
204	409	13.516	35.798	2347.	2125.	5.1	0.72	500.5	526.2	-25.7	-5.14	2115.6	9.4	0.44
343	504	12.232H	35.620	2340.	2138.	6.6	0.92	571.3	582.9	-11.6	-2.02	2134.4	3.6	0.17
205	507	12.497	35.655	2342.	2140.	6.1	0.86	550.4	584.0	-33.6	-6.11	2129.3	10.7	0.50
206	607	11.131	35.480	2333.	2163.	8.7	1.09	634.4	697.4	-63.0	-9.92	2146.9	16.1	0.74
140	702	9.377H	35.336	2327.	2170.	11.2	1.30	720.5	750.4	-29.9	-4.15	2163.3	6.7	0.31
207	706	9.665	35.345	2330.	2172.	11.2	1.28	714.9	747.6	-32.7	-4.57	2164.7	7.3	0.34
344	707	9.404H	35.338	2328.	2170.	11.1	1.29	722.8	746.2	-23.4	-3.24	2164.8	5.2	0.24
208	806	8.823	35.337	2336.	2180.	12.2	1.33	734.9	760.7	-25.8	-3.51	2174.4	5.6	0.26
141	902	8.173H	35.392	2337.	2180.	12.3	1.29		756.8					
209	906	8.242	35.387	2339.	2182.	12.6	1.29	728.8	757.5	-28.7	-3.94	2175.7	6.3	0.29
142	1003	7.743H	35.413	2339.	2183.	12.5	1.27	722.0	762.6	-40.6	-5.62	2174.0	9.0	0.41
210	1004	7.686	35.394	2339.	2179.	12.7	1.27	724.4	744.0	-19.6	-2.70	2174.6	4.4	0.20
211	1103	7.318	35.395	2342.	2182.	12.8	1.26	720.1	745.9	-25.8	-3.58	2176.2	5.8	0.27
212	1202	6.768	35.359	2335.	2176.	13.1	1.24	716.7	745.3	-28.6	-3.99	2169.6	6.4	0.30
143	1202	6.608H	35.347	2337.	2175.	12.9	1.24		733.0					
213	1302	6.199	35.297	2332.	2177.	13.2	1.23	718.2	761.7	-43.5	-6.05	2167.4	9.6	0.44
214	1400	5.539	35.215	2327.	2175.	13.2	1.22	718.0	771.4	-53.4	-7.44	2163.3	11.7	0.54
215	1500	5.129	35.166	2323.	2169.	13.7	1.22	718.3	759.1	-40.8	-5.68	2160.0	9.0	0.41
144	1500	5.219H	35.175	2331.	2169.	13.4	1.23	716.4	727.1	-10.7	-1.49	2166.6	2.4	0.11

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	45	33 31.5 N	35 59.8 W	23 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
216	1597	4.758	35.120	2323.	2171.	13.9	1.22	717.4	767.8	-50.4	-7.02	2160.0	11.0	0.51
217	1793	4.195	35.060	2320.	2166.	15.5	1.23	718.7	755.9	-37.2	-5.17	2157.8	8.2	0.38
218	1993	3.801	35.020	2320.	2169.	17.7	1.26	720.6	770.3	-49.7	-6.90	2158.2	10.8	0.50
145	1995	3.754H	35.016	2323.	2164.	17.6	1.26	722.7	734.1	-11.4	-1.58	2161.4	2.6	0.12
219	2191	3.398	34.978	2322.	2167.	20.1	1.26	728.5	751.3	-22.8	-3.13	2162.0	5.0	0.23
220	2390	3.212	34.967	2324.	2171.	23.2	1.30	729.7	762.7	-33.0	-4.53	2163.8	7.2	0.33
146	2495	3.160H	34.963	2322.	2170.	23.6	1.30	732.8	766.0	-33.2	-4.54	2162.8	7.2	0.33
221	2588	3.091	34.958	2327.	2172.	25.5	1.32	734.5	755.5	-21.0	-2.86	2167.4	4.6	0.21
222	2787	3.012	34.951	2334.	2177.	27.5	1.35	736.4	750.0	-13.6	-1.85	2174.0	3.0	0.14
223	2986	2.975	34.947	2333.	2175.	29.1	1.36	740.9	745.2	-4.3	-0.59	2174.0	1.0	0.04
236	3150	2.930	34.944	2334.	2181.	30.5	1.38	741.5	769.1	-27.6	-3.72	2175.1	5.9	0.27
230	3357	2.854	34.938	2337.	2182.	33.1	1.41	747.4	761.9	-14.5	-1.94	2178.9	3.1	0.14
148	3391	2.803H	34.936	2336.	2192.	33.8	1.43	750.5	815.9	-65.4	-8.71	2178.6	13.4	0.61
224	3404	2.751	34.930	2340.	2189.	36.0	1.45	746.6	783.5	-34.9	-4.67	2181.6	7.4	0.34

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	37	-31.0	13.80
DELPCO2/PCO2	37	-5.0	2.50
DELTCO2	37	8.6	4.82
DELTCO2/TCO2	37	0.4	0.23

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	46	33 59.0 N	30 37.5 W	24 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	15	19.316	36.507	2390.	2074.	1.1	0.05	315.6	345.8	-30.2	-9.57	2054.0	20.0	0.96
102	106	18.002	36.425	2386.	2075.	1.1	0.07	329.9	351.9	-22.0	-6.67	2061.0	14.0	0.67
103	206	16.406	36.263	2373.	2103.	2.5	0.38	398.0	423.1	-25.1	-6.31	2090.5	12.5	0.60
104	305	15.192	36.066			3.2	0.51	435.3						
105	404	13.604	35.817	2353.	2127.	4.6	0.69	495.8	517.7	-21.9	-4.42	2118.8	8.2	0.38
106	504	12.346	35.644	2340.	2140.	6.2	0.87	552.5	589.6	-37.1	-6.71	2128.3	11.7	0.55
107	604	11.597	35.569	2348.	2147.	6.6	0.94	587.2	589.3	-2.1	-0.36	2146.4	0.6	0.03
108	703	10.497	35.496	2338.	2159.	8.0	1.05	634.9	662.9	-28.0	-4.42	2151.6	7.4	0.34
109	804	9.762	35.483	2345.	2169.	9.6	1.15	673.9	678.9	-5.0	-0.74	2167.8	1.3	0.06
110	904	9.001	35.481	2341.	2176.	10.7	1.19	691.8	723.3	-31.5	-4.56	2168.6	7.4	0.34
111	1004	8.487	35.482	2347.	2180.	11.5	1.22	704.2	718.5	-14.3	-2.03	2176.6	3.4	0.15
112	1104	7.953	35.465	2342.	2182.	11.9	1.21	703.4	746.2	-42.8	-6.09	2172.2	9.8	0.45
113	1204	7.293	35.411	2343.	2178.	12.3	1.21	707.9	723.4	-15.5	-2.19	2174.4	3.6	0.17
114	1304	6.793	35.370	2339.	2180.	13.1	1.24	713.6	747.7	-34.1	-4.78	2172.3	7.7	0.35
115	1403	5.924	35.259	2333.	2173.	12.9	1.21	714.6	738.0	-23.4	-3.28	2167.7	5.3	0.24
116	1602	5.023	35.162	2325.	2169.	14.5	1.23	717.1	751.1	-34.0	-4.73	2161.5	7.5	0.35
117	1801	4.522	35.100	2326.	2167.	15.2	1.23	719.4	736.8	-17.4	-2.43	2163.1	3.9	0.18
118	1998	4.049	35.050	2322.	2166.	17.6	1.25	721.2	747.7	-26.5	-3.68	2160.1	5.9	0.27
119	2196	3.681	35.014	2327.	2169.	19.9	1.27	726.2	741.1	-14.9	-2.06	2165.7	3.3	0.15
120	2295	3.467	34.995	2327.	2168.	21.7	1.28	727.5	736.7	-9.2	-1.27	2165.9	2.1	0.09
121	2395	3.293	34.979	2331.	2171.	23.5	1.31	730.3	734.5	-4.2	-0.57	2170.1	0.9	0.04
122	2494	3.220	34.972	2329.	2175.	24.1	1.31	730.7	760.8	-30.1	-4.12	2168.5	6.5	0.30
123	2585	3.199	34.967	2334.	2176.	25.1	1.31	733.8	745.0	-11.2	-1.53	2173.5	2.5	0.11
136	2685	3.116	34.964	2331.	2176.	25.8	1.31	734.8	757.5	-22.7	-3.08	2171.1	4.9	0.23
130	2859	2.984	34.953	2333.	2177.	28.7	1.36	740.6	754.4	-13.8	-1.86	2174.0	3.0	0.14

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TID	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	46	33 59.0 N	30 37.5 W	24 5 81	

		MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
124	2904	2.962	34.949	2332.	2178.	29.3	1.36	739.7	763.3	-23.6	-3.20	2172.9	5.1	0.23

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	25	-21.6	10.51
DELPCO2/PCO2	25	-3.6	2.22
DELTCO2	25	6.3	4.48
DELTCO2/TCO2	25	0.3	0.22

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	SIN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	47	33 58.8 N	30 5.1 W	25 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	14	18.609	36.247	2373.	2069.	1.1	0.03	334.8	357.9	-23.1	-6.90	2054.7	14.3	0.69
102	23	18.458	36.247	2375.	2066.	1.1	0.03		350.2					
103	53	17.602	36.235	2371.	2070.	1.0	0.03		362.0					
104	77	16.720	36.178	2374.	2076.	1.1	0.07	346.7	367.8	-21.1	-6.09	2063.4	12.6	0.60
105	103	16.495	36.164	2375.	2074.	1.3	0.11	358.0	363.0	-5.0	-1.38	2071.1	2.9	0.14
106	153	15.720	36.097	2368.	2094.	1.9	0.26		410.9					
107	203	14.737	35.985	2367.	2106.	2.6	0.43		437.3					
108	249	13.715	35.835	2348.	2116.	3.4	0.57		498.9					
109	300	13.130	35.761	2354.	2119.	3.9	0.64	494.6	493.0	1.6	0.31	2119.6	-0.6	-0.03
110	349	12.725	35.702	2345.	2126.	4.7	0.74	520.3	533.1	-12.8	-2.46	2121.5	4.5	0.21
111	400	12.228	35.643	2352.	2130.	5.3	0.80		526.7					
112	446	11.854	35.589	2336.	2141.	6.3	0.91		604.0					
113	494	11.586	35.568	2341.	2140.	5.7	0.87		585.3					
114	543	11.131	35.526	2334.	2144.	6.4	0.95	594.6	619.7	-25.1	-4.22	2136.8	7.2	0.34
115	591	10.803	35.503	2337.	2147.	7.0	0.99	613.6	621.3	-7.7	-1.25	2144.8	2.2	0.10
116	642	10.703	35.497	2335.	2150.	7.1	1.01	619.8	638.8	-19.0	-3.06	2144.8	5.2	0.24
117	689	10.175	35.476	2342.	2159.	8.7	1.10	655.8	649.8	6.0	0.91	2160.6	-1.6	-0.07
118	736	9.874	35.476	2337.	2165.	9.5	1.14	670.0	691.2	-21.2	-3.16	2159.7	5.3	0.24
119	784	9.650	35.479	2343.	2170.	10.0	1.16	680.1	690.2	-10.1	-1.49	2167.5	2.5	0.12
120	828	9.203	35.491	2342.	2176.	10.6	1.19		719.8					
121	873	8.796	35.483	2345.	2175.	11.3	1.21		704.2					
122	919	8.523	35.476	2343.	2178.	11.6	1.22	702.1	724.8	-22.7	-3.23	2172.7	5.3	0.24
123	968	8.313	35.466	2344.	2173.	11.9	1.22		699.4					
135	1053	7.655	35.434	2342.	2173.	11.9	1.21		706.3					
131	1255	6.537	35.325	2335.	2169.	12.1	1.20		713.4					

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	47	33 58.8 N	30 5.1 W	25 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
129	1321	6.231	35.283	2332.	2168.	12.2	1.20		720.2					
127	1376	6.080	35.272	2331.	2165.	12.6	1.21		710.9					
124	1434	5.567	35.213	2328.	2170.	12.9	1.21		743.8					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-13.4	9.92
DELPCO2/PCO2	12	-2.7	2.23
DELTCO2	12	5.0	4.49
DELTCO2/TCO2	12	0.2	0.22

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	49	33 46.1 N	25 8.0 W	26 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	10	19.758	36.638	2396.	2077.	1.1	0.02	321.85	343.7	-21.9	-6.81	2062.5	14.5	0.70
102	208	16.882	36.443	2385.	2102.	1.9	0.20	376.2	402.4	-26.2	-6.96	2087.9	14.1	0.67
103	306	14.097	35.900	2354.	2122.	3.7	0.58	471.7	502.3	-30.6	-6.48	2110.0	12.0	0.57
104	406	12.750	35.714	2344.	2130.	5.0	0.73	527.8	547.2	-19.4	-3.68	2123.3	6.7	0.31
105	507	11.748	35.592	2335.	2135.	5.6	0.83	571.4	586.1	-14.7	-2.58	2130.5	4.5	0.21
106	608	11.042	35.537	2334.	2149.	6.5	0.93	607.5	638.0	-30.5	-5.01	2140.5	8.5	0.40
107	709	10.445	35.526	2337.	2163.	8.7	1.06	657.3	682.9	-25.6	-3.90	2156.5	6.5	0.30
108	809	9.929	35.573	2345.	2177.	10.5	1.15	682.8	713.9	-31.1	-4.55	2169.5	7.5	0.34
109	910	9.275	35.561	2347.	2181.	12.0	1.23	708.5	724.1	-15.6	-2.20	2177.4	3.6	0.17
110	1009	8.806	35.565	2351.	2189.	13.2	1.27	723.3	744.3	-21.0	-2.90	2184.2	4.8	0.22
111	1208	8.335	35.627	2358.	2190.	13.7	1.23	707.1	722.6	-15.5	-2.19	2186.4	3.6	0.17
112	1407	7.128	35.493	2348.	2181.	12.8	1.16	694.5	719.0	-24.5	-3.53	2175.2	5.8	0.27
113	1607	5.722	35.290	2335.	2171.	13.6	1.17	707.8	721.6	-13.8	-1.95	2167.8	3.2	0.15
114	1695	5.137	35.195	2330.	2169.	13.6	1.18	709.4	730.4	-21.0	-2.96	2164.2	4.8	0.22
115	1804	4.464	35.088	2322.	2161.	14.0	1.18	716.9	724.9	-8.0	-1.12	2159.2	1.8	0.08
116	1902	4.412	35.098	2324.	2163.	14.8	1.19	715.2	726.0	-10.8	-1.51	2160.5	2.5	0.11
117	1995	3.997	35.038	2317.	2159.	15.5	1.19	718.6	734.8	-16.2	-2.26	2155.4	3.6	0.17
118	2488	3.344	34.991	2332.	2172.	23.1	1.27	728.2	734.5	-6.3	-0.86	2170.6	1.4	0.06
119	2983	2.915	34.954			31.2	1.35	743.3						
120	3480	2.645	34.925			38.4	1.43	752.9						
121	3982	2.524	34.908	2345.	2193.	42.3	1.47	759.2	781.7	-22.5	-2.97	2188.3	4.7	0.22
122	4482	2.465	34.898	2353.	2200.	45.0	1.49	760.2	781.8	-21.6	-2.85	2195.4	4.6	0.21
123	4971	2.474	34.897	2348.	2195.	45.1	1.48	761.4	778.6	-17.2	-2.26	2191.4	3.6	0.17
124	4971	2.474	34.893	2352.	2200.	46.1	1.50	763.5	786.0	-22.5	-2.94	2195.3	4.7	0.21
130	5456	2.517	34.890	2353.	2201.	46.9	1.50	762.4	787.2	-24.8	-3.25	2195.8	5.2	0.24

S SINGLE ANALYSIS

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	49	33 46.1 N	25 8.0 W	26 5 81	

		MEASURED QUANTITIES						*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-20.1	6.66
DELPCO2/PCO2	23	-3.3	1.65
DELTCO2	23	5.7	3.44
DELTCO2/TCO2	23	0.3	0.17

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	52	31 57.5 N	26 14.0 W	27 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	7	20.197	36.688	2402.	2079.	0.9	0.03	317.2	339.9	-22.7	-7.14	2063.8	15.2	0.73
202	56	18.939	36.555	2389.	2067.	0.9	0.03	311.8	336.5	-24.7	-7.91	2050.3	16.7	0.81
203	96	18.501	36.538	2390.	2076.	1.0	0.02	319.0	349.1	-30.1	-9.43	2056.3	19.7	0.95
204	147	18.208	36.626	2394.	2091.	1.2	0.11	343.8	370.0	-26.2	-7.62	2075.2	15.8	0.76
205	208	17.106	36.388	2381.	2098.	1.9	0.25	375.7	400.5	-24.8	-6.60	2084.7	13.3	0.64
206	309	15.464	36.109	2363.	2112.	2.8	0.44	426.1	460.2	-34.1	-8.00	2096.7	15.3	0.72
207	408	13.864	35.860		2156.	3.9	0.62	483.4						
209	709	10.765	35.512	2342.	2161.	7.9	1.02	636.6	657.6	-21.0	-3.29	2155.4	5.6	0.26
210	910	9.481	35.517	2344.	2176.	10.6	1.17	694.4	712.1	-17.7	-2.55	2171.8	4.2	0.19
211	1011	8.810	35.524	2348.	2187.	11.9	1.21	704.6	745.8	-41.2	-5.85	2177.5	9.5	0.43
212	1111	8.256	35.534	2346.	2182.	12.4	1.21	710.7	731.7	-21.0	-2.96	2177.1	4.9	0.22
213	1211	7.603	35.483	2343.	2181.	12.9	1.20	710.0	738.0	-28.0	-3.94	2174.6	6.4	0.29
214	1311	6.934	35.409	2340.	2179.	13.5	1.21	716.8	739.8	-23.0	-3.21	2173.8	5.2	0.24
215	1410	6.507	35.366	2343.	2180.	13.2	1.20	711.6	731.5	-19.9	-2.80	2175.4	4.6	0.21
216	1609	5.377	35.219	2327.	2169.	14.6	1.21	718.3	743.4	-25.1	-3.49	2163.4	5.6	0.26
217	1810	4.755	35.150	2327.	2170.	16.7	1.24	725.3	747.5	-22.2	-3.07	2165.1	4.9	0.23
218	2012	4.285	35.100	2327.	2170.	19.2	1.28	728.9	747.5	-18.6	-2.55	2165.9	4.1	0.19
219	2508	3.370	34.999	2333.	2176.	25.5	1.33	734.8	749.9	-15.1	-2.05	2172.7	3.3	0.15
220	3006	2.844	34.947	2339.	2182.	33.1	1.38	746.1	753.7	-7.6	-1.02	2180.3	1.7	0.08
221	3506	2.616	34.922	2351.	2198.	38.8	1.44	753.6	780.1	-26.5	-3.52	2192.4	5.6	0.26
222	4007	2.492	34.904	2343.	2195.	43.0	1.47	759.8	800.5	-40.7	-5.36	2186.6	8.4	0.38
236	4905	2.446	34.891	2351.	2197.	46.1	1.49	762.8	775.7	-12.9	-1.70	2194.3	2.7	0.12
235	4984	2.453	34.889		2204.	46.3	1.50	763.0						
230	5182	2.466	34.886	2352.	2205.	46.6	1.50	764.3	811.0	-46.7	-6.11	2195.4	9.6	0.43
226	5278	2.478	34.890	2355.	2201.	46.9	1.50	763.0	778.6	-15.6	-2.04	2197.7	3.3	0.15

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	52	31 57.5 N	26 14.0 W	27 5 81	

	MEASURED QUANTITIES							*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-24.6	9.09
DELPCO2/PCO2	23	-4.4	2.35
DELTCO2	23	8.1	5.16
DELTCO2/TCO2	23	0.4	0.25

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	55	30 59.1 N	26 50.8 W	29 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
111	606	11.633	35.591			6.1	0.88	584.0						
112	804	11.194	35.810			8.2	0.97	623.6						
113	1004	11.518	36.147			8.2	0.89	593.0						
114	1106	11.509	36.236			8.3	0.88	592.9						
115	1205	11.220	36.227			9.0	0.91	598.0						
116	1303	10.619	36.140			10.1	0.98	618.6						
117	1501	7.633	35.585			13.6	1.18	690.0						
118	1701	5.639	35.271			15.1	1.23	717.3						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	62	30 48.7 N	26 43.8 W	30 5 81	

		MEASURED QUANTITIES							*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
248	500	12.248H	35.655	2371.	2149.	5.4	0.81	555.1	*	534.8	20.3	3.66	*	2155.9	-6.9	-0.32
247	651	10.905H	35.544		2162.	7.4	1.01	633.8	*							
246	801	11.318H	35.900	2382.	2179.	7.9	0.94	610.4	*	602.8	7.6	1.25	*	2181.3	-2.3	-0.10
245	952	11.458H	36.120	2385.	2190.	8.0	0.90	598.2	*	634.5	-36.3	-6.06	*	2179.4	10.6	0.48
244	1102	11.232H	36.194	2398.	2199.	8.7	0.92	600.1	*	628.2	-28.1	-4.69	*	2190.7	8.3	0.38
243	1202	10.796H	36.159	2397.	2203.	9.7	0.96	615.3	*	645.2	-29.9	-4.87	*	2194.4	8.6	0.39
242	1302	9.540H	35.904	2375.	2198.	11.4	1.08	652.4	*	696.5	-44.1	-6.76	*	2186.6	11.4	0.52
241	1452	7.342H	35.504	2345.	2188.	13.9	1.22	709.0	*	762.3	-53.3	-7.52	*	2176.0	12.0	0.55
240	1602	6.325H	35.368	2342.	2181.	14.5	1.22	714.1	*	740.3	-26.2	-3.66	*	2175.0	6.0	0.27

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	8	-23.8	23.55
DELPCO2/PCO2	8	-3.6	3.72
DELTCO2	8	6.0	6.45
DELTCO2/TCO2	8	0.3	0.30

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	66	30 59.6 N	25 28.5 W	30 5 81	

	MEASURED QUANTITIES									CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	1211	7.574	35.476	2358.	2188.	14.1	1.26	724.9	*	711.6	13.3	1.84	*	2191.1	-3.1	-0.14
102	1313	7.051	35.424	2343.	2178.	14.4	1.26	721.3	*	724.4	-3.1	-0.43	*	2177.3	0.7	0.03
103	1412	6.372	35.344	2349.	2183.	15.2	1.27	730.0	*	722.1	7.9	1.08	*	2184.8	-1.8	-0.08
104	1612	5.375	35.219	2335.	2174.	15.1	1.23	721.8	*	734.2	-12.4	-1.72	*	2171.2	2.8	0.13
105	1797	4.784	35.157	2333.	2173.	16.5	1.25	725.2	*	737.0	-11.8	-1.62	*	2170.4	2.6	0.12
106	1982	4.265	35.101	2334.	2176.	19.3	1.29	728.0	*	746.6	-18.6	-2.56	*	2171.9	4.1	0.19
107	2476	3.291	34.992	2334.	2177.	26.4	1.35	739.0	*	750.8	-11.8	-1.59	*	2174.4	2.6	0.12
108	2992	2.837	34.947	2340.	2187.	33.3	1.39	742.9*	*	773.2	-30.3	-4.08	*	2180.5	6.5	0.30
109	3501	2.587	34.920	2347.	2189.	39.8	1.45	756.7	*	754.7	2.0	0.27	*	2189.4	-0.4	-0.02
110	4004	2.483	34.904	2347.	2203.	43.2	1.47	757.7	*	823.1	-65.4	-8.63	*	2189.7	13.3	0.60
111	4684	2.435	34.892			46.2	1.50	761.5	*							
124	5176	2.464	34.889	2350.	2198.	46.8	1.50	764.2	*	785.1	-20.9	-2.73	*	2193.6	4.4	0.20
112	5442	2.497	34.887			46.9	1.50	764.6	*							

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	11	-13.7	20.42
DELPCO2/PCO2	11	-1.8	2.71
DELTCO2	11	2.9	4.26
DELTCO2/TCO2	11	0.1	0.19

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	67	30 54.0 N	24 51.0 W	31 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
151	6	20.643	36.984	2426.	2091.	0.8	0.02		331.3					
152	95	18.621	36.756	2407.	2093.	0.9	0.04		356.4					
153	295	14.913	36.056	2368.	2129.	2.9	0.53		490.9					
154	496	12.388	35.683	2343.	2143.	5.1	0.80		590.6					
155	794	9.859	35.503	2346.	2182.	10.7	1.22		731.1					
156	993	8.533	35.485	2346.	2196.	13.5	1.32		797.2					
157	1091	7.943	35.458	2354.	2195.	15.1	1.37		759.0					
158	1189	7.445	35.443	2347.	2197.	15.9	1.36		798.1					
159	1386	6.740	35.427	2354.	2185.	14.3	1.22		712.8					
160	1684	5.033	35.194	2329.	2172.	14.9	1.21		748.9					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	68	30 46.5 N	24 14.0 W	31 5 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
340	2	20.954H	36.999	2430.	2093.	0.9	0.00		329.5					
201	7	21.005	37.005	2417.	2084.	0.9	0.02	315.5	331.9	-16.4	-5.20	2072.7	11.3	0.54
202	101	19.005	36.809	2408.	2086.	1.0	0.02	319.8	344.2	-24.4	-7.62	2069.8	16.2	0.78
341	204	17.069H	36.458			1.8	0.23	385.8						
203	206	17.752	36.621	2393.	2099.	1.4	0.16	360.8	385.7	-24.9	-6.90	2084.8	14.2	0.68
204	298	15.279	36.107	2364.	2117.	2.9	0.47	448.5	469.9	-21.4	-4.77	2107.8	9.2	0.43
342	303	14.995H	36.057	2366.	2120.	3.0	0.49		472.9					
205	390	13.845	35.873	2350.	2125.	4.0	0.62	491.3	519.2	-27.9	-5.68	2114.6	10.4	0.49
206	486	12.932	35.707	2342.	2140.	5.4	0.80	565.4	584.0	-18.6	-3.30	2134.2	5.8	0.27
343	503	12.477H	35.701	2348.	2145.	5.0	0.78	557.9	583.3	-25.4	-4.56	2136.9	8.1	0.38
207	582	11.929	35.639	2338.	2142.	5.9	0.88	589.3	601.8	-12.5	-2.12	2138.3	3.7	0.17
208	679	11.018	35.551	2336.	2163.	8.2	1.06	645.1	686.9	-41.8	-6.49	2152.3	10.7	0.49
344	753	10.252H	35.500	2342.	2172.	9.6	1.14	685.0	702.1	-17.1	-2.49	2167.9	4.1	0.19
209	773	10.176	35.502	2335.	2165.	10.1	1.17	686.7	698.8	-12.1	-1.77	2162.1	2.9	0.14
210	872	9.423	35.495	2341.	2180.	11.8	1.26	716.8	742.5	-25.7	-3.59	2174.2	5.8	0.27
211	975	8.885	35.525	2351.	2182.	12.7	1.26	721.4	713.2	8.2	1.14	2183.9	-1.9	-0.09
345	1004	8.700H	35.523	2352.	2189.	12.8	1.27	730.2	740.0	-9.8	-1.34	2186.8	2.2	0.10
212	1183	8.096	35.547	2354.	2191.	13.7	1.26	715.4	741.2	-25.8	-3.60	2185.1	5.9	0.27
346	1202	7.880H	35.538	2355.	2189.	13.0	1.21		728.0					
213	1290	7.510	35.503	2348.	2181.	13.6	1.22	709.7	719.4	-9.7	-1.37	2178.7	2.3	0.10
214	1409	6.709	35.404	2343.	2183.	14.3	1.22	716.1	746.2	-30.1	-4.20	2176.2	6.8	0.31
347	1499	5.802H	35.286	2331.	2168.	14.0	1.20	731.7	724.3	7.4	1.01	2169.7	-1.7	-0.08
215	1609	5.496	35.248	2333.	2174.	14.4	1.21	714.8	742.9	-28.1	-3.94	2167.7	6.3	0.29
216	1806	4.669	35.146	2329.	2170.	15.7	1.22	714.9	738.7	-23.8	-3.33	2164.6	5.4	0.25
348	1991	4.074H	35.075	2328.	2166.	18.1	1.24	744.1	724.3	19.8	2.66	2170.4	-4.4	-0.20

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TID	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	68	30 46.5 N	24 14.0 W	31 5 81	

	MEASURED QUANTITIES							*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
217	1996	4.148	35.086	2330.	2172.	18.0	1.24	720.2	*	743.6	-23.4	-3.25	*	2166.8	5.2	0.24
218	2488	3.257	34.989	2333.	2180.	26.5	1.33	734.3	*	768.4	-34.1	-4.65	*	2172.6	7.4	0.34
219	2982	2.782	34.943	2345.	2186.	34.5	1.40	748.7	*	748.1	0.6	0.08	*	2186.1	-0.1	-0.01
220	3468	2.584	34.920	2348.	2196.	40.0	1.45	753.1	*	783.7	-30.6	-4.06	*	2189.5	6.5	0.29
221	3960	2.489	34.908	2342.	2185.	43.4	1.48	830.1M	*	756.6	73.5	8.85	*	2199.9	-14.9	-0.68
222	4463	2.440	34.892	2356.	2198.	46.6	1.50	762.3	*	760.1	2.2	0.28	*	2198.5	-0.5	-0.02
223	4965	2.443	34.889	2352.	2191.	47.2	1.51	765.1S	*	744.1	21.0	2.75	*	2195.6	-4.6	-0.21
236	5222	2.466	34.891	2353.	2200.	47.3	1.52	762.0	*	782.0	-20.0	-2.63	*	2195.8	4.2	0.19
224	5426	2.485	34.887	2354.	2200.	47.4	1.50	763.2	*	777.6	-14.4	-1.89	*	2196.9	3.1	0.14

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	30	-12.9	21.98
DELPCO2/PCO2	30	-2.4	3.32
DELTCO2	30	4.3	6.03
DELTCO2/TCO2	30	0.2	0.28

S SINGLE ANALYSIS

M QUESTIONABLE DUE TO MACHINE MALFUNCTION

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	71	28 45.5 N	25 11.1 W	1 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	8	21.105	36.973	2429.	2087.	2.2	0.04	315.8	322.0	-6.2	-1.96	2082.6	4.4	0.21
202	111	18.419	36.754	2407.	2091.	2.2	0.03	336.6	353.3	-16.7	-4.95	2080.4	10.6	0.51
341	206	16.939H	36.442					381.8						
203	214	17.446	36.558	2390.	2099.	2.4	0.19	371.0	389.9	-18.9	-5.09	2088.5	10.5	0.50
204	313	14.745	36.007	2361.	2114.	3.8	0.52	452.8	467.8	-15.0	-3.31	2107.6	6.4	0.30
205	413	13.116	35.773	2358.	2134.	5.3	0.71	520.9	524.7	-3.8	-0.72	2132.7	1.3	0.06
343	504	12.206H	35.664					560.5						
206	512	12.348	35.678	2341.	2137.	5.8	0.79	558.3	577.1	-18.8	-3.37	2131.0	6.0	0.28
207	611	11.439	35.582	2347.	2155.	7.0	0.94	606.3	619.9	-13.6	-2.24	2151.1	3.9	0.18
208	707	10.589	35.516	2336.	2164.	9.3	1.10	662.6	691.1	-28.5	-4.30	2156.9	7.1	0.33
344	754	9.973H	35.494					690.0S						
209	806	9.811	35.488	2345.	2182.	11.2	1.22	701.4	734.9	-33.5	-4.77	2174.2	7.8	0.36
210	906	9.085	35.475	2344.	2185.	13.1	1.32	732.1	753.3	-21.2	-2.89	2180.3	4.7	0.21
345	1001	8.016H	35.430					763.5						
212	1204	7.316	35.406	2344.	2190.	15.9	1.37	753.8	776.2	-22.4	-2.97	2185.2	4.8	0.22
213	1306	6.962	35.406		2187.	15.4	1.30	728.4*						
214	1406	6.425	35.353	2346.	2183.	15.5	1.27	724.6	733.7	-9.1	-1.25	2180.9	2.1	0.09
347	1499	5.653H	35.257					744.2						
215	1606	5.405	35.230	2343.	2181.	18.5	1.33	740.6	735.5	5.1	0.69	2182.1	-1.1	-0.05
216	1805	4.699	35.149	2335.	2181.	20.0	1.33	739.0	767.1	-28.1	-3.80	2174.9	6.1	0.28
348	1997	3.996H	35.069					739.7						
217	2006	4.129	35.082	2334.	2174.	22.1	1.34	739.8	737.6	2.2	0.29	2174.5	-0.5	-0.02
218	2504	3.225	34.988	2335.	2181.	28.5	1.37	740.7	765.9	-25.2	-3.40	2175.6	5.4	0.25
219	3002	2.758	34.942	2349.	2191.	35.7	1.43	749.2	754.7	-5.5	-0.73	2189.8	1.2	0.05
220	3498	2.532	34.915	2346.	2197.	41.4	1.48	750.1	797.3	-47.2	-6.30	2187.1	9.9	0.45

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

CTD	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	71	28 45.5 N	25 11.1 W	1 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
221	3989	2.449	34.904	2355.	2198.	44.4	1.49	758.4	763.7	-5.3	-0.70	2196.9	1.1	0.05
224	4944	2.429	34.894	2358.	2205.	47.0	1.51	761.1	785.0	-23.9	-3.14	2200.0	5.0	0.23
236	5100	2.443	34.890	2350.	2201.	47.6	1.52	764.5	800.6	-36.1	-4.72	2193.5	7.5	0.34

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	21	-17.7	12.83
DELPCO2/PCO2	21	-2.8	1.85
DELTCO2	21	5.0	3.30
DELTCO2/TCO2	21	0.2	0.15

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	SIN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	76	28 48.5 N	20 17.2 W	3 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
102	208	17.294	36.540	2400.	2104.	1.8	0.22	374.2	383.7	-9.5	-2.53	2098.7	5.3	0.25
103	307	14.562	35.987	2364.	2123.	3.6	0.56	467.2	484.1	-16.9	-3.61	2116.1	6.9	0.32
104	407	13.177	35.788	2348.	2137.	4.9	0.73	528.3	558.9	-30.6	-5.78	2126.7	10.3	0.48
105	508	12.058	35.648	2345.	2145.	5.7	0.84	569.9	591.5	-21.6	-3.78	2138.3	6.7	0.31
106	609	11.133	35.559	2334.	2154.	8.0	1.03	639.8	658.3	-18.5	-2.89	2149.1	4.9	0.23
107	710	10.383	35.506	2340.	2175.	10.6	1.22	700.9	724.1	-23.2	-3.30	2169.6	5.4	0.25
108	810	9.619	35.478	2345.	2187.	13.0	1.34	746.5	758.5	-12.0	-1.61	2184.4	2.6	0.12
109	909	8.886	35.463	2344.	2195.	14.7	1.41	767.4	802.0	-34.6	-4.50	2187.9	7.1	0.32
110	1010	8.530	35.497	2344.	2190.	15.2	1.39	758.0	778.3	-20.3	-2.68	2185.7	4.3	0.20
111	1110	7.893	35.455	2351.	2196.	16.2	1.41	765.0	776.2	-11.2	-1.47	2193.6	2.4	0.11
112	1210	7.341	35.424	2343.	2194.	17.1	1.41	762.3	800.9	-38.6	-5.06	2186.0	8.0	0.36
113	1310	6.954	35.406	2344.	2185.	17.1	1.36	749.4	752.8	-3.4	-0.46	2184.3	0.7	0.03
114	1410	6.382	35.343	2342.	2193.	18.4	1.37	755.2	798.9	-43.7	-5.78	2183.9	9.1	0.42
115	1510	5.875	35.286	2340.	2187.	19.3	1.38	754.3	777.3	-23.0	-3.05	2182.1	4.9	0.22
116	1607	5.503	35.248	2338.	2188.	19.6	1.36	749.0	790.3	-41.3	-5.51	2179.3	8.7	0.40
117	1808	4.617	35.138	2336.	2183.	23.1	1.40	756.2	773.1	-16.9	-2.24	2179.4	3.6	0.16
118	2009	4.066	35.071	2336.	2189.	25.4	1.41	761.0	801.9	-40.9	-5.38	2180.6	8.4	0.38
119	2506	3.263	34.9880	2338.	2186.	30.9	1.41	761.7	777.7	-16.0	-2.11	2182.6	3.4	0.15
120	3002	2.770	34.941	2343.	2197.	37.5	1.45	758.5	810.7	-52.2	-6.88	2186.3	10.7	0.49
121	3499	2.538	34.915	2350.	2197.	42.0	1.49	760.6	780.1	-19.5	-2.56	2192.9	4.1	0.19
122	4000	2.411	34.899	2353.	2204.	45.4	1.50	760.8	801.1	-40.3	-5.30	2195.6	8.4	0.38
136	4418	2.404	34.892	2357.	2204.	47.1	1.51	758.0	784.6	-26.6	-3.50	2198.4	5.6	0.25
123	4637	2.423	34.891	2355.	2202.	47.3	1.51	762.8	783.0	-20.2	-2.65	2197.7	4.3	0.19
124	4637	2.423	34.890	2355.	2199.	47.0	1.51	759.2	769.2	-10.0	-1.31	2196.9	2.1	0.10

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-24.6	12.56
DELPCO2/PCO2	24	-3.5	1.65
DELTCO2	24	5.7	2.64
DELTCO2/TCO2	24	0.3	0.12

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	80	29 15.7 N	18 30.6 W	5 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	9	20.159	36.864	2418.	2090.	1.0	0.02	320.0	*	338.4	-18.4	-5.74	*	2077.6	12.4	0.59
202	112	17.864	36.672	2402.	2105.	1.2	0.08	356.7	*	383.3	-26.6	-7.45	*	2089.6	15.4	0.73
203	213	17.084	36.510	2393.	2104.	1.4	0.16	372.3	*	393.9	-21.6	-5.81	*	2092.1	11.9	0.57
204	312	14.270	35.939	2355.	2124.	3.7	0.57	476.5	*	505.4	-28.9	-6.07	*	2112.7	11.3	0.53
205	413	12.830	35.742	2351.	2137.	4.7	0.72	532.6	*	550.5	-17.9	-3.35	*	2130.9	6.1	0.28
206	510	11.915	35.637	2339.	2148.	5.8	0.86	587.4	*	619.5	-32.1	-5.47	*	2138.6	9.4	0.44
207	607	11.135	35.562	2341.	2163.	7.4	1.00	630.8	*	669.1	-38.3	-6.07	*	2152.9	10.1	0.47
208	705	10.298	35.506	2338.	2176.	10.5	1.22	716.6*	*	736.3	-19.7	-2.75	*	2171.5	4.5	0.21
209	803	9.061	35.344	2336.	2200.	15.0	1.54	836.1	*	865.1	-29.0	-3.47	*	2194.7	5.3	0.24
210	905	8.249	35.280	2332.	2203.	17.2	1.63	888.0*	*	903.0	-15.0	-1.69	*	2200.4	2.6	0.12
211	1006	7.720	35.275	2337.	2203.	18.3	1.62	861.7	*	876.7	-15.0	-1.74	*	2200.3	2.7	0.12
212	1107	7.369	35.291	2337.	2202.	18.5	1.57	848.3	*	870.8	-22.5	-2.66	*	2197.9	4.1	0.19
213	1208	7.018	35.317	2344.	2202.	18.7	1.51	807.3	*	836.7	-29.4	-3.65	*	2196.3	5.7	0.26
214	1308	6.749	35.316	2341.	2197.	18.7	1.47	797.2	*	824.2	-27.0	-3.39	*	2191.7	5.3	0.24
215	1407	6.439	35.313	2348.	2195.	19.2	1.43	776.7	*	782.6	-5.9	-0.76	*	2193.8	1.2	0.06
216	1506	5.887	35.260	2345.	2194.	20.5	1.43	774.1	*	789.7	-15.6	-2.02	*	2190.8	3.2	0.15
217	1604	5.484	35.224	2345.	2190.	21.1	1.41	769.8*	*	769.9	-0.1	-0.01	*	2190.0	0.0	0.00
218	1803	4.921	35.170	2338.	2188.	22.5	1.40	760.5	*	789.2	-28.7	-3.77	*	2182.0	6.0	0.27
219	2002	4.385	35.118	2342.	2185.	23.4	1.36	751.7	*	756.9	-5.2	-0.69	*	2183.9	1.1	0.05
220	2490	3.350	35.000	2342.	2193.	31.8	1.43	763.8	*	794.7	-30.9	-4.05	*	2186.6	6.4	0.29
221	2987	2.831	34.946	2352.	2198.	36.9	1.45	764.5	*	775.4	-10.9	-1.42	*	2195.7	2.3	0.10
222	3486	2.557	34.916	2355.	2205.	43.3	1.50	767.6	*	797.2	-29.6	-3.86	*	2198.9	6.1	0.28
223	3734	2.476	34.905	2360.	2207.	45.3	1.51	771.8	*	786.2	-14.4	-1.87	*	2204.0	3.0	0.14
236	3997	2.429	34.901	2356.	2206.	46.2	1.52	769.4	*	798.0	-28.6	-3.72	*	2200.1	5.9	0.27
224	4280	2.408	34.892	2355.	2203.	46.9	1.51	761.9	*	788.3	-26.4	-3.46	*	2197.5	5.5	0.25

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	80	29 15.7 N	18 30.6 W	5 6 81	

		MEASURED QUANTITIES						*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	25	-21.5	9.35
DELPCO2/PCO2	25	-3.4	1.87
DELTCO2	25	5.9	3.81
DELTCO2/TCO2	25	0.3	0.18

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	83	31 0.0 N	20 18.2 W	6 6 81	

		MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	12	20.897	36.800	2410.	2089.	1.1	0.02	322.0	*	346.2	-24.2	-7.52	2073.0	16.0	0.77
102	106	17.986	36.664	2398.	2098.	1.3	0.04	344.9	*	376.6	-31.7	-9.20	2079.1	18.9	0.90
103	214	16.838	36.431	2387.	2102.	2.0	0.23	381.4	*	398.9	-17.5	-4.59	2092.6	9.4	0.45
104	313	14.487	35.970	2359.	2118.	3.5	0.53	463.3	*	481.6	-18.3	-3.94	2110.5	7.5	0.35
105	413	13.259	35.789	2350.	2131.	4.5	0.66	509.2	*	535.8	-26.6	-5.22	2121.5	9.5	0.45
106	512	12.092	35.640	2336.	2132.	5.3	0.78	559.2	*	574.2	-15.0	-2.68	2127.2	4.8	0.22
107	613	11.317	35.564	2340.	2149.	6.4	0.91	601.5	*	619.3	-17.8	-2.97	2143.9	5.1	0.24
108	711	10.614	35.522	2337.	2166.	8.7	1.06	651.8	*	695.2	-43.4	-6.66	2155.1	10.9	0.51
109	808	9.993	35.522	2343.	2176.	10.5	1.18	692.7	*	716.4	-23.7	-3.41	2170.4	5.6	0.26
110	909	9.335	35.543	2348.	2183.	12.4	1.27	721.9	*	729.2	-7.3	-1.01	2181.3	1.7	0.08
111	1009	8.746	35.522	2352.	2191.	13.9	1.32	738.9	*	749.1	-10.2	-1.38	2188.7	2.3	0.10
112	1110	8.341	35.530	2348.	2188.	14.1	1.31	733.7	*	751.4	-17.7	-2.41	2184.1	3.9	0.18
113	1210	8.024	35.555	2357.	2191.	14.2	1.26	717.2	*	729.8	-12.6	-1.76	2188.1	2.9	0.13
114	1311	7.412	35.505	2348.	2191.	14.6	1.24	712.8	*	764.6	-51.8	-7.27	2179.4	11.6	0.53
115	1411	6.852	35.439	2354.	2184.	14.8	1.23	724.2	*	708.6	15.6	2.16	2187.7	-3.7	-0.17
116	1610	5.616	35.284	2337.	2179.	15.9	1.24	719.0	*	750.5	-31.5	-4.38	2172.0	7.0	0.32
117	1811	4.791	35.176	2335.	2172.	16.6	1.23	716.7	*	724.7	-8.0	-1.12	2170.2	1.8	0.08
118	2010	4.154	35.087	2327.	2171.	18.0	1.23	719.1	*	751.2	-32.1	-4.46	2163.9	7.1	0.33
119	2506	3.194	34.982	2333.	2175.	26.1	1.31	732.4	*	744.9	-12.5	-1.71	2172.2	2.8	0.13
120	3003	2.763	34.941	2349.	2193.	35.7	1.41	752.9	*	764.3	-11.4	-1.52	2190.5	2.5	0.11
121	3501	2.533	34.941	2351.	2191.	41.5	1.46	757.0	*	748.1	8.9	1.17	2192.9	-1.9	-0.09
122	3997	2.426	34.903	2346.	2194.	45.0	1.49	760.7	*	782.9	-22.2	-2.92	2189.3	4.7	0.21
123	4495	2.412	34.893	2352.	2197.	46.7	1.50	760.4	*	771.6	-11.2	-1.48	2194.6	2.4	0.11
124	4495	2.412	34.892	2354.	2203.	46.8	1.50	762.2	*	792.6	-30.4	-3.98	2196.7	6.3	0.29
136	4730	2.430	34.891	2355.	2203.	47.1	1.50	760.3	*	787.8	-27.5	-3.61	2197.2	5.8	0.26

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	83	31 0.0 N	20 18.2 W	6 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	25	-19.2	14.17
DELPCO2/PCO2	25	-3.3	2.57
DELTCO2	25	5.8	4.94
DELTCO2/TCO2	25	0.3	0.23

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIC	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	85	32 15.5 N	21 17.3 W	7 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	99	18.037	36.653	2406.	2093.	1.3	0.06	337.7	356.8	-19.1	-5.66	2081.0	12.0	0.57
102	156	17.738	36.632	2395.	2098.	1.4	0.13	353.4	380.9	-27.5	-7.79	2082.0	16.0	0.76
103	208	17.516	36.597	2401.	2102.	1.4	0.13	357.1	379.2	-22.1	-6.18	2089.2	12.8	0.61
104	258	16.519	36.372	2380.	2102.	2.0	0.26	385.4	410.0	-24.6	-6.37	2089.2	12.8	0.61
105	308	15.168	36.079	2364.	2113.	2.9	0.47	440.4	460.4	-20.0	-4.55	2104.2	8.8	0.42
106	355	14.076	35.906	2352.	2119.	3.6	0.59	474.8	498.8	-24.0	-5.05	2109.6	9.4	0.44
107	405	13.459	35.815	2348.	2123.	3.9	0.64	500.0	518.2	-18.2	-3.63	2116.3	6.7	0.32
108	505	12.291	35.658	2340.	2131.	4.9	0.77	544.2	560.2	-16.0	-2.93	2125.7	5.3	0.25
109	605	11.412	35.584	2341.	2150.	6.5	0.95	610.8	620.6	-9.8	-1.61	2147.2	2.8	0.13
110	712	10.651	35.525	2336.	2166.	8.8	1.10	667.3	699.6	-32.3	-4.85	2158.0	8.0	0.37
111	812	9.881	35.485	2345.	2181.	11.2	1.27	718.1	730.4	-12.3	-1.72	2178.2	2.8	0.13
112	911	9.331	35.510	2343.	2182.	12.0	1.28	721.5	744.0	-22.5	-3.12	2176.9	5.1	0.23
113	1211	8.012	35.557	2356.	2190.	14.2	1.26	717.2	729.3	-12.1	-1.69	2187.2	2.8	0.13
114	1510	6.461	35.415	2344.	2181.	13.7	1.19	699.8	732.7	-32.9	-4.70	2173.3	7.7	0.35
115	1510	6.461	35.421	2352.	2181.	13.7	1.18	701.0	702.6	-1.6	-0.23	2180.6	0.4	0.02
116	1510	6.461	35.412	2343.	2180.	13.9	1.19	699.7	732.7	-33.0	-4.72	2172.3	7.7	0.35

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	16	-20.5	8.56
DELPCO2/PCO2	16	-4.1	1.99
DELTCO2	16	7.6	4.21
DELTCO2/TCO2	16	0.4	0.20

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	91	30 57.7 N	22 50.7 W	8 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
109	13	21.679	36.625					322.4 *						
110	310	14.106	35.896					467.7 *						
111	410	12.703	35.707	2340.	2129.	4.5	0.70	519.4 *	554.1	-34.7	-6.68	* 2117.1	11.9	0.56
112	505	11.709	35.589					559.9 *						
113	604	11.199	35.568	2339.	2147.	5.9	0.88	598.8 *	615.0	-16.2	-2.71	* 2142.3	4.7	0.22
114	704	10.747	35.617	2344.	2163.	8.2	1.03	639.0 *	660.1	-21.1	-3.31	* 2157.4	5.6	0.26
115	804	11.498	35.992	2379.	2184.	7.8	0.91	595.6 *	629.7	-34.1	-5.72	* 2174.0	10.0	0.46
116	905	11.699	36.170	2386.	2188.	7.9	0.86	582.4 *	625.3	-42.9	-7.37	* 2175.1	12.9	0.59
117	1004	11.579	36.233	2399.	2196.	8.1	0.87	587.9* *	614.7	-26.8	-4.56	* 2187.8	8.2	0.37
118	1105	11.461	36.241	2397.	2193.	8.4	0.88	585.3 *	611.2	-25.9	-4.43	* 2185.1	7.9	0.36
119	1206	11.092	36.241	2400.	2201.	9.2	0.92	599.8 *	630.1	-30.3	-5.05	* 2192.0	9.0	0.41
120	1304	10.186	36.078	2387.	2202.	10.5	1.00	625.1 *	672.8	-47.7	-7.64	* 2189.0	13.0	0.59
121	1402	8.176	35.680	2366.	2188.	12.6	1.14	676.8 *	685.2	-8.4	-1.24	* 2185.9	2.1	0.10
122	1504	7.414	35.577	2353.	2185.	13.1	1.14	682.2 *	718.2	-36.0	-5.27	* 2176.3	8.7	0.40
124	1997	4.390	35.124	2327.	2168.	17.7	1.24	716.5 *	738.0	-21.5	-3.00	* 2163.2	4.8	0.22

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-28.8	10.70
DELPCO2/PCO2	12	-4.7	1.87
DELTCO2	12	8.2	3.30
DELTCO2/TCO2	12	0.4	0.15

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	96	32 14.7 N	23 1.5 W	9 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	6	21.074	36.599			1.1	0.02	322.5						
102	216	15.293	36.077	2363.	2111.	2.8	0.42	426.3	457.5	-31.2	-7.33	2097.0	14.0	0.67
103	415	12.898	35.741	2348.	2126.	4.4	0.68	519.4	525.7	-6.3	-1.20	2123.8	2.2	0.10
104	515	12.003	35.632	2339.	2141.	5.3	0.80	561.6	595.0	-33.4	-5.95	2130.7	10.3	0.48
105	615	11.150	35.531	2330.	2141.	6.4	0.91	601.9	621.5	-19.6	-3.25	2135.4	5.6	0.26
106	714	10.545	35.519	2336.	2164.	8.3	1.05	652.7	690.6	-37.9	-5.80	2154.4	9.6	0.44
107	815	9.969	35.528	2336.	2179.	10.6	1.20	694.9	757.5	-62.6	-9.01	2164.7	14.3	0.65
108	914	9.429	35.563	2348.	2188.	12.1	1.26	716.2	751.6	-35.4	-4.94	2180.0	8.0	0.37
109	1012	9.037	35.604	2352.	2191.	12.8	1.26	711.4*	750.0	-38.6	-5.43	2182.2	8.8	0.40
110	1112	8.636	35.625	2356.	2194.	13.3	1.24	709.1	748.1	-39.0	-5.50	2185.1	8.9	0.41
111	1213	8.237	35.620	2359.	2195.	13.4	1.22	700.6	740.1	-39.5	-5.64	2185.8	9.2	0.42
112	1313	7.663	35.556	2353.	2193.	14.0	1.22	707.9	754.3	-46.4	-6.55	2182.4	10.6	0.48
113	1412	7.062	35.481			14.0	1.20	701.1						
114	1505	6.523	35.406			14.0	1.20	706.2*						
115	1600	5.944	35.332			14.6	1.20	707.1						
116	1803	4.955	35.200			15.8	1.20	711.5						
117	2007	4.426	35.129			18.2	1.23	715.2S						
118	2505	3.288	34.989			24.1	1.29	728.4						
119	2995	2.825	34.947			32.1	1.36	739.2						
120	3479	2.624	34.924			38.1	1.43	751.5						
121	4085	2.488	34.904			42.9	1.47	755.4						
122	4677	2.443	34.894			45.5	1.50	760.7						
136	5187	2.475	34.889			46.5	1.50	760.9						
124	5358	2.492	34.888			46.6	1.50	777.3						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	11	-35.4	13.58
DELPCO2/PCO2	11	-5.5	1.93
DELTCO2	11	9.2	3.24
DELTCO2/TCO2	11	0.4	0.15

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	99	33 11.2 N	21 44.0 W	10 6 81	

	MEASURED QUANTITIES									CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	7	22.649	36.566	2394.	2076.	1.1	0.02	323.0	*	344.3	-21.3	-6.59	*	2062.0	14.0	0.67
202	216	16.134	36.241	2372.	2108.	2.2	0.33	398.2	*	435.3	-37.1	-9.32	*	2089.9	18.1	0.86
203	415	13.037	35.750	2352.	2130.	4.5	0.68	509.1	*	527.5	-18.4	-3.62	*	2123.3	6.7	0.31
204	513	12.165	35.639	2336.	2132.	5.3	0.78	547.4	*	573.8	-26.4	-4.82	*	2123.5	8.5	0.40
205	613	11.173	35.520	2340.	2141.	5.7	0.83	571.5	*	590.7	-19.2	-3.35	*	2135.1	5.9	0.28
206	713	10.816	35.552	2341.	2163.	6.6	0.94	619.0	*	668.3	-49.3	-7.96	*	2149.8	13.2	0.61
207	813	11.070	35.825	2366.	2177.	8.0	0.96	621.3	*	643.2	-21.9	-3.53	*	2170.9	6.1	0.28
208	914	11.729	36.143	2383.	2182.	7.5	0.86	580.8	*	613.2	-32.4	-5.58	*	2172.1	9.9	0.45
209	1013	11.374	36.153	2391.	2189.	8.3	0.90	595.4	*	613.6	-18.2	-3.06	*	2183.5	5.5	0.25
210	1113	10.910	36.092	2390.	2195.	9.2	0.96	612.4	*	637.4	-25.0	-4.08	*	2187.8	7.2	0.33
211	1213	9.666	35.897	2381.	2193.	10.5	1.04	646.1	*	655.9	-9.8	-1.51	*	2190.4	2.6	0.12
212	1312	8.186	35.644	2357.	2188.	11.4	1.10	672.8	*	716.6	-43.8	-6.51	*	2177.3	10.7	0.49
213	1411	6.791	35.410	2344.	2175.	11.7	1.14	700.6	*	706.6	-6.0	-0.86	*	2173.6	1.4	0.07
214	1610	5.430	35.216	2333.	2173.	12.7	1.17	710.7	*	737.3	-26.6	-3.75	*	2166.9	6.1	0.28
215	1809	4.707	35.126	2323.	2162.	13.8	1.18	713.3	*	725.8	-12.5	-1.76	*	2159.1	2.9	0.13
216	2009	4.230	35.075	2326.	2168.	15.5	1.21	708.0	*	740.6	-32.6	-4.61	*	2160.6	7.4	0.34
217	2257	3.653	35.016	2326.	2166.	19.2	1.23	712.5	*	731.1	-18.6	-2.61	*	2161.8	4.2	0.20
218	2820	2.984	34.958	2340.	2183.	28.6	1.33	731.9	*	753.5	-21.6	-2.96	*	2178.2	4.8	0.22
219	3501	2.625	34.924	2343.	2185.	38.9	1.44	744.5	*	752.3	-7.8	-1.05	*	2183.3	1.7	0.08
220	3998	2.506	34.906	2352.	2199.	42.7	1.47	756.8	*	780.7	-23.9	-3.16	*	2193.9	5.1	0.23
221	4499	2.446	34.895			45.5	1.50	750.1	*							
222	5001	2.466	34.891			46.6	1.50	755.4	*							
236	5107	2.474	34.890	2351.	2199.	46.7	1.50	755.5	*	786.1	-30.6	-4.04	*	2192.6	6.4	0.29
224	5305	2.499	34.889	2353.	2200.	46.9	1.50	751.8	*	781.8	-30.0	-4.00	*	2193.6	6.4	0.29

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-24.2	10.65
DELPCO2/PCO2	22	-4.0	2.09
DELTCO2	22	7.0	4.01
DELTCO2/TCO2	22	0.3	0.19

* DELTA PCO2 > 0.5 %

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TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	107	34 46.0 N	23 6.0 W	12 6 81	

	MEASURED QUANTITIES							*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	3	22.084	36.505	2392.	2077.	1.2	0.02	317.85	*	347.9	-30.1	-9.49	*	2057.2	19.8	0.95
102	210	16.523	36.315	2376.	2104.	2.1	0.29	384.3	*	420.2	-35.9	-9.33	*	2085.6	18.4	0.87
103	407	13.128	35.761	2350.	2133.	4.6	0.68	498.2	*	541.4	-43.2	-8.67	*	2117.5	15.5	0.73
104	506	12.100	35.628	2338.	2139.	5.7	0.82	547.7	*	591.0	-43.3	-7.91	*	2125.3	13.7	0.64
105	604	11.330	35.547	2336.	2140.	5.2	0.81	560.6	*	599.2	-38.6	-6.89	*	2128.1	11.9	0.56
106	700	10.869	35.529	2335.	2154.	6.3	0.93	606.9	*	653.6	-46.7	-7.69	*	2141.2	12.8	0.60
107	801	10.087	35.483	2338.	2168.	9.6	1.13	664.9	*	699.8	-34.9	-5.25	*	2159.4	8.6	0.40
108	901	9.619	35.515	2342.	2178.	10.5	1.17	678.1*	*	728.4	-50.3	-7.42	*	2166.0	12.0	0.55
109	1002	9.248	35.584	2351.	2181.	10.9	1.17	681.0	*	708.9	-27.9	-4.10	*	2174.2	6.8	0.31
110	1100	8.462	35.524	2347.	2185.	11.7	1.19	694.4	*	740.6	-46.2	-6.65	*	2174.3	10.7	0.49
111	1201	8.048	35.529	2346.	2182.	12.0	1.18	696.0	*	731.5	-35.5	-5.10	*	2173.7	8.3	0.38
112	1401	6.742	35.383	2341.	2180.	12.7	1.19	703.4	*	739.5	-36.1	-5.13	*	2171.7	8.3	0.38
113	1501	6.224	35.319	2337.	2172.	12.7	1.18	706.2	*	718.7	-12.5	-1.78	*	2169.1	2.9	0.13
114	1600	5.608	35.238	2333.	2174.	12.9	1.19	709.3	*	741.7	-32.4	-4.57	*	2166.6	7.4	0.34
115	1803	4.537	35.084	2319.	2157.	13.1	1.17	712.6	*	718.8	-6.2	-0.87	*	2155.6	1.4	0.07
116	2002	4.050	35.030	2319.	2164.	14.5	1.19	714.7	*	749.6	-34.9	-4.88	*	2156.2	7.8	0.36
117	2499	3.287	34.972	2320.	2161.	21.1	1.24	724.5	*	732.0	-7.5	-1.03	*	2159.3	1.7	0.08
118	2994	2.883	34.949	2336.	2183.	31.6	1.36	739.4	*	770.5	-31.1	-4.21	*	2176.3	6.7	0.31
119	3490	2.674	34.928	2345.	2188.	37.3	1.42	751.5	*	757.6	-6.1	-0.81	*	2186.7	1.3	0.06
120	3964	2.551	34.911	2346.	2196.	41.8	1.47	755.3	*	792.4	-37.1	-4.91	*	2188.2	7.8	0.35
121	4442	2.469	34.896	2350.	2195.	45.0	1.50	759.6	*	770.8	-11.2	-1.47	*	2192.6	2.4	0.11
122	4937	2.478	34.892	2353.	2203.	46.4	1.50	758.4	*	796.9	-38.5	-5.08	*	2195.0	8.0	0.36
130	5018	2.484	34.893	2353.	2198.	46.5	1.51	758.3	*	772.2	-13.9	-1.84	*	2195.0	3.0	0.14
124	5174	2.499	34.891	2351.	2197.	46.6	1.50	758.9	*	775.9	-17.0	-2.24	*	2193.4	3.6	0.16

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-29.9	13.53
DELPCO2/PCO2	24	-4.9	2.68
DELTCO2	24	8.4	5.12
DELTCO2/TCO2	24	0.4	0.24

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	3	109	35 31.5 N	23 59.1 W	13 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	4	21.224	36.323	2381.	2073.	1.2	0.02	330.3	*	354.3	-24.0	-7.27	*	2057.8	15.2	0.73
202	113	16.533	36.180	2373.	2080.	1.2	0.08	351.9	*	376.4	-24.5	-6.95	*	2065.8	14.2	0.68
203	213	14.859	36.004	2362.	2109.	2.6	0.39	425.8	*	453.7	-27.9	-6.56	*	2096.4	12.6	0.60
204	314	13.389	35.796	2345.	2122.	3.8	0.61	483.0	*	521.9	-38.9	-8.05	*	2107.4	14.6	0.69
205	414	12.389	35.665	2344.	2132.	4.7	0.72	525.3	*	552.3	-27.0	-5.14	*	2122.8	9.2	0.43
206	513	11.494	35.563	2332.	2139.	5.5	0.81	562.1	*	607.9	-45.8	-8.15	*	2125.1	13.9	0.65
207	613	10.816	35.514	2336.	2151.	6.9	0.93	608.3	*	638.9	-30.6	-5.02	*	2142.5	8.5	0.40
208	712	10.420	35.535	2337.	2168.	8.5	1.05	648.8	*	703.8	-55.0	-8.47	*	2154.2	13.8	0.64
209	813	9.625	35.495	2343.	2174.	10.4	1.15	681.8	*	707.5	-25.7	-3.77	*	2167.8	6.2	0.29
210	913	9.060	35.502	2341.	2177.	11.3	1.19	695.0	*	727.9	-32.9	-4.74	*	2169.3	7.7	0.35
211	1012	8.561	35.527	2350.	2182.	11.7	1.17	693.3	*	716.1	-22.8	-3.28	*	2176.6	5.4	0.25
212	1112	7.973	35.500	2348.	2181.	11.8	1.17	695.9	*	718.4	-22.5	-3.23	*	2175.7	5.3	0.24
213	1213	7.460	35.466	2346.	2178.	12.1	1.16	696.9	*	712.6	-15.7	-2.26	*	2174.3	3.7	0.17
214	1413	6.165	35.309	2339.	2179.	12.6	1.17	707.6	*	741.5	-33.9	-4.79	*	2171.3	7.7	0.35
215	1611	4.953	35.140	2322.	2163.	12.9	1.16	709.9	*	734.3	-24.4	-3.43	*	2157.5	5.5	0.26
216	1807	4.225	35.045	2319.	2161.	13.7	1.17	714.2	*	735.8	-21.6	-3.03	*	2156.1	4.9	0.23
217	1984	3.776	34.999	2318.	2159.	14.9	1.18	711.2	*	730.2	-19.0	-2.67	*	2154.7	4.3	0.20
218	2477	3.167	34.965	2324.	2168.	22.5	1.24	724.4	*	748.1	-23.7	-3.27	*	2162.8	5.2	0.24
219	2964	2.768	34.941	2341.	2184.	32.7	1.36	739.0	*	754.6	-15.6	-2.11	*	2180.6	3.4	0.16
220	3446	2.629	34.924	2342.	2191.	38.2	1.42	753.3	*	784.7	-31.4	-4.17	*	2184.4	6.6	0.30
221	3944	2.526	34.908	2347.	2193.	42.2	1.47	752.1	*	773.1	-21.0	-2.80	*	2188.5	4.5	0.20
222	4446	2.475	34.898	2354.	2204.	45.0	1.49	758.7	*	797.0	-38.3	-5.05	*	2196.0	8.0	0.36
236	4700	2.476	34.895D			45.6	1.50	760.3	*							
224	4901	2.489	34.895	2349.	2201.	45.8	1.50	763.0	*	804.1	-41.1	-5.38	*	2192.5	8.5	0.38

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-28.8	9.56
DELPCO2/PCO2	23	-4.8	1.93
DELTCO2	23	8.2	3.79
DELTCO2/TCO2	23	0.4	0.18

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	110	37 35.1 N	22 39.3 W	20 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
370	10	19.3 I	36.191					332.5						
401	15	19.260	36.195	2381.	2077.	1.4	0.04	331.8	359.7	-27.9	-8.40	2059.7	17.3	0.83
371	15	19.3 I	36.189					336.0						
372	18	19.204H	36.173					333.4						
374	25	18.247H	36.137					330.8						
375	28	18.039H	36.154					328.9						
402	29	19.263	36.200	2378.	2078.	1.3	0.03	333.7	365.8	-32.1	-9.61	2058.4	19.6	0.94
376	31	17.895H	36.177					328.8						
377	34	17.790H	36.178					330.9*						
378	49	17.323H	36.237					335.1*						
403	52	17.491	36.046	2370.	2069.	1.4	0.03	335.6*	360.1	-24.5	-7.30	2054.0	15.0	0.73
404	73	17.263	36.232	2380.	2074.	1.4	0.03	332.5	356.6	-24.1	-7.25	2058.9	15.1	0.73
405	91	16.308	36.127	2372.	2086.	1.5	0.09	355.5	388.5	-33.0	-9.27	2067.4	18.6	0.89
406	181	14.602	35.907	2361.	2098.	2.2	0.27	400.4	429.2	-28.8	-7.20	2084.0	14.0	0.67
407	317	13.043	35.743	2347.	2119.	4.2	0.62	487.5	508.3	-20.8	-4.27	2111.1	7.9	0.37
408	573	11.219	35.539	2341.	2148.	6.3	0.86	576.1	612.0	-35.9	-6.22	2137.3	10.7	0.50
409	784	9.630	35.431	2333.	2169.	9.9	1.11	671.0	722.2	-51.2	-7.63	2156.7	12.3	0.57
410	874	8.970	35.422	2343.	2185.	10.9	1.15	692.0	754.5	-62.5	-9.03	2170.7	14.3	0.66
411	1033	7.907	35.414	2339.	2176.	11.7	1.17	701.9	730.2	-28.3	-4.03	2169.4	6.6	0.30
412	1092	7.793	35.451	2351.	2187.	11.9	1.16	740.3*	732.3	8.0	1.08	2188.8	-1.8	-0.08
413	1142	7.374	35.411	2343.	2182.	12.1	1.16	703.6	740.7	-37.1	-5.28	2173.5	8.5	0.39
414	1222	7.224	35.448	2353.	2194.	12.3	1.15	725.3	755.9	-30.6	-4.21	2187.2	6.8	0.31
415	1262	7.159	35.464	2340.	2180.	12.4	1.14	698.6	744.7	-46.1	-6.60	2169.4	10.6	0.49
416	1355	6.582	35.378	2344.	2182.	12.4	1.14	718.5	736.6	-18.1	-2.53	2177.9	4.1	0.19
417	1463	5.055	35.117	2330.	2171.	12.2	1.15	721.1*	738.1	-17.0	-2.35	2167.2	3.8	0.18

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	116	37 35.1 N	22 39.3 W	20 6 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
418	2019	3.662	34.972	2319.	2164.	14.6	1.16	720.3	748.2	-27.9	-3.87	2157.8	6.2	0.28
419	2660	3.001	34.957	2335.	2177.	25.7	1.27	732.9	744.9	-12.0	-1.64	2174.3	2.7	0.12
420	3133	2.727	34.937	2347.	2196.	34.5	1.36	748.4	786.7	-38.3	-5.11	2187.9	8.1	0.37
421	3527	2.621	34.923	2351.	2199.	39.1	1.42	752.3	784.3	-32.0	-4.26	2192.2	6.8	0.31
422	3917	2.563	34.917	2356.	2207.	41.9	1.46	754.8	802.6	-47.8	-6.34	2197.0	10.0	0.45
423	4304	2.561	34.908			43.3	1.47	756.1						
424	4683	2.593	34.907	2357.	2206.	43.8	1.48	759.7	793.8	-34.1	-4.50	2198.8	7.2	0.32

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-30.5	13.99
DELPCO2/PCO2	23	-5.5	2.60
DELTCO2	23	9.8	5.29
DELTCO2/TCO2	23	0.5	0.26

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	111	37 52.2 N	17 28.2 W	21 6 81	5694

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
370	2	18.8 I	36.024					341.1 *						
373	16	18.664H	36.002					342.5 *						
401	23	18.445	36.027	2363.	2065.	1.1	0.05	342.1 *	362.8	-20.7	-6.05	* 2052.6	12.4	0.60
377	30	16.020H	35.975					341.8 *						
381	50	15.6 I	36.038					353.2 *						
402	105	15.056	36.016	2363.	2088.	1.4	0.17	383.8 *	405.7	-21.9	-5.72	* 2076.6	11.4	0.55
403	184	13.507	35.815	2345.	2110.	3.0	0.49	459.4 *	489.4	-30.0	-6.54	* 2097.8	12.2	0.58
404	264	12.568	35.687	2336.	2120.	4.0	0.64	499.3 *	537.0	-37.7	-7.54	* 2106.5	13.5	0.64
405	339	12.008	35.622	2334.	2121.	4.1	0.70	549.0 *	544.3	4.7	0.85	* 2122.6	-1.6	-0.07
406	416	11.566	35.577	2336.	2132.	4.8	0.76	538.0 *	572.9	-34.9	-6.48	* 2120.6	11.4	0.53
407	564	10.875	35.532	2334.	2146.	6.3	0.91	606.2 *	626.9	-20.7	-3.42	* 2140.1	5.9	0.27
408	715	10.503	35.629	2343.	2170.	8.9	1.06	643.3 *	692.0	-48.7	-7.57	* 2157.5	12.5	0.57
409	864	10.030	35.724	2357.	2178.	10.4	1.11	662.6 *	676.5	-13.9	-2.10	* 2174.4	3.6	0.16
410	994	9.744	35.790	2360.	2190.	10.9	1.11	668.2* *	716.1	-47.9	-7.17	* 2178.2	11.8	0.54
411	1139	9.479	35.868	2370.	2188.	11.3	1.08	654.7 *	673.9	-19.2	-2.93	* 2183.0	5.0	0.23
412	1282	8.777	35.790	2367.	2191.	11.8	1.09	663.9 *	694.6	-30.7	-4.63	* 2183.2	7.8	0.36
413	1421	7.801	35.654	2353.	2181.	12.5	1.11	670.1 *	702.5	-32.4	-4.83	* 2173.0	8.0	0.37
414	1605	6.017	35.349	2332.	2175.	13.3	1.15	697.2 *	752.4	-55.2	-7.91	* 2162.5	12.5	0.58
415	1833	4.826	35.168	2323.	2161.	14.6	1.18	708.2 *	722.4	-14.2	-2.00	* 2157.7	3.3	0.15
416	2131	3.903	35.045	2323.	2169.	18.0	1.22	704.4 *	757.4	-53.0	-7.53	* 2157.2	11.8	0.55
417	2421	3.334	34.986	2320.	2163.	22.1	1.27	712.8 *	742.3	-29.5	-4.13	* 2156.4	6.6	0.31
418	2715	2.987	34.957	2328.	2178.	26.7	1.29	731.0 *	779.3	-48.3	-6.61	* 2167.7	10.3	0.48
419	3156	2.724	34.936	2335.	2182.	34.1	1.38	743.1 *	770.2	-27.1	-3.65	* 2176.2	5.8	0.27
420	3655	2.597	34.920	2344.	2200.	40.0	1.45	*	821.6					
421	4155	2.520	34.906	2340.	2195.	43.4	1.48	756.4 *	814.2	-57.8	-7.64	* 2183.2	11.8	0.54

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	111	37 52.2 N	17 28.2 W	21 6 81	5694

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
422	4658	2.501	34.898	2351.	2203.	45.1	1.49	754.6	805.4	-50.8	-6.73	2192.4	10.6	0.48
423	5162	2.549	34.896	2349.	2197.	45.6	1.50	754.3	784.7	-30.4	-4.04	2190.6	6.4	0.29
424	5667	2.619	34.896	2354.	2204.	45.7	1.50	754.3	797.3	-43.0	-5.70	2195.0	9.0	0.41

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-33.2	15.43
DELPCO2/PCO2	23	-5.2	2.22
DELTCO2	23	8.8	3.78
DELTCO2/TCO2	23	0.4	0.18

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	112	37 35.3 N	13 28.6 W	23 6 81	4513

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
401	8	19.637	36.219	2370.	2079.	0.5	0.05	343.1S	379.5	-36.4	-10.61	2057.7	21.3	1.03
402	19	19.262	36.226	2368.	2079.	0.6	0.02	345.6	382.4	-36.8	-10.64	2057.7	21.3	1.03
403	30	17.972	36.088	2362.	2074.	0.6	0.05	346.7	380.9	-34.2	-9.87	2054.2	19.8	0.95
404	40	16.242	35.940	2349.	2065.	0.7	0.05	342.1	382.7	-40.6	-11.88	2041.6	23.4	1.13
405	50	15.544	35.942	2353.	2068.	0.8	0.05	349.0	382.2	-33.2	-9.50	2049.1	18.9	0.92
406	63	14.841	35.929	2350.	2072.	0.9	0.06	356.9	394.3	-37.4	-10.49	2051.4	20.6	1.00
407	151	13.599	35.907	2349.	2118.	2.8	0.44	459.2	502.1	-42.9	-9.34	2100.9	17.1	0.81
408	268	12.313	35.704	2334.	2124.	4.0	0.64	514.7	554.6	-39.9	-7.75	2110.3	13.7	0.65
409	337	11.835	35.636	2334.	2130.	4.4	0.70	526.6	572.8	-46.2	-8.76	2114.7	15.3	0.72
410	407	11.601	35.637	2328.	2139.	5.0	0.79	557.6	621.0	-63.4	-11.37	2119.9	19.1	0.89
411	640	11.172	35.792	2347.	2168.	7.8	0.95	608.4	671.3	-62.9	-10.33	2150.9	17.1	0.79
412	866	11.155	36.063		2182.	8.9	0.94	598.2						
413	1403	7.487	35.613	2349.	2179.	12.5	1.09	665.6	707.5	-41.9	-6.30	2168.6	10.4	0.48
414	1621	5.847	35.345	2331.	2169.	14.3	1.16	683.3	729.5	-46.2	-6.75	2158.1	10.9	0.50
415	1886	4.589	35.148	2321.	2163.	16.5	1.20	705.4	739.5	-34.1	-4.84	2155.3	7.7	0.36
416	2197	3.813	35.053	2320.	2165.	21.8	1.26	711.5	752.0	-40.5	-5.69	2156.0	9.0	0.42
417	2626	3.121	34.978	2329.	2176.	28.6	1.34	731.4	766.4	-35.0	-4.78	2168.4	7.6	0.35
418	2901	2.842	34.950	2332.	2180.	33.4	1.38	733.6	773.7	-40.1	-5.46	2171.4	8.6	0.40
419	3199	2.678	34.933	2336.	2185.	36.6	1.41	743.6	781.1	-37.5	-5.04	2177.0	8.0	0.36
420	3500	2.587	34.922	2338.	2188.	40.4	1.45	746.4	788.1	-41.7	-5.58	2179.2	8.8	0.40
421	3799	2.517	34.910	2341.	2195.	42.9	1.47	753.8	809.4	-55.6	-7.38	2183.5	11.5	0.52
422	4097	2.449	34.901	2343.	2195.	45.1	1.49	750.2	800.5	-50.3	-6.71	2184.5	10.5	0.48
423	4296	2.447	34.898	2341.	2195.	45.5	1.49	756.6	810.1	-53.5	-7.07	2184.0	11.0	0.50
424	4494	2.449	34.896	2345.	2195.	46.1	1.50	751.4	792.5	-41.1	-5.46	2186.4	8.6	0.39

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-43.1	8.48
DELPCO2/PCO2	23	-7.9	2.29
DELTCO2	23	13.9	5.20
DELTCO2/TCO2	23	0.7	0.26

S SINGLE ANALYSIS

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	113	37 34.7 N	10 10.3 W	24 6 81	2806

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	9	20.321	36.153	2372.	2078.	0.8	0.03	323.8	*	373.8	-50.0	-15.45	* 2047.3	30.7	1.48
202	27	17.754	36.199	2369.	2076.	0.8	0.03	342.0	*	375.2	-33.2	-9.71	* 2056.4	19.6	0.95
203	37	17.008	36.201	2370.	2076.	0.8	0.03	325.5	*	373.7	-48.2	-14.82	* 2046.5	29.5	1.42
204	76	15.422	36.138	2367.	2086.	1.0	0.05	366.5	*	396.3	-29.8	-8.13	* 2069.7	16.3	0.78
205	195	13.693	35.922	2353.	2116.	2.8	0.41	436.1	*	488.0	-51.9	-11.91	* 2094.1	21.9	1.03
206	314	12.213	35.675	2334.	2130.	4.7	0.73	550.3	*	573.2	-22.9	-4.17	* 2122.6	7.4	0.35
207	460	11.415	35.603	2333.	2144.	5.9	0.84	555.9	*	623.4	-67.5	-12.14	* 2123.7	20.3	0.95
208	627	11.799	35.912	2358.	2166.	7.0	0.84	571.5	*	629.3	-57.8	-10.11	* 2148.7	17.3	0.80
209	667	11.990	36.016	2369.	2168.	6.8	0.81	529.7	*	604.1	-74.4	-14.05	* 2143.8	24.2	1.11
210	769	11.428	36.007	2368.	2178.	8.5	0.92	595.7	*	642.9	-47.2	-7.92	* 2164.4	13.6	0.62
211	822	11.312	36.075	2378.	2187.	9.0	0.92	567.4	*	645.8	-78.4	-13.82	* 2163.6	23.4	1.07
212	896	11.683	36.249	2389.	2192.	8.3	0.84	576.6	*	631.2	-54.6	-9.48	* 2175.5	16.5	0.75
213	986	11.367	36.224U	2390.	2194.	9.0	0.89	564.5	*	635.3	-70.8	-12.53	* 2172.4	21.6	0.98
214	1051	11.301	36.271	2393.	2201.	9.1	0.88	591.2	*	651.9	-60.7	-10.26	* 2183.3	17.7	0.80
215	1162	11.244	36.334	2400.	2199.	9.4	0.87	550.8	*	624.1	-73.3	-13.30	* 2175.9	23.1	1.05
216	1258	11.364	36.405	2410.	2205.	9.2	0.85	581.6	*	616.0	-34.4	-5.92	* 2194.4	10.6	0.48
217	1350	11.070	36.377		2203.	9.5	0.86	556.1	*						
218	1410	9.890	36.114	2384.	2200.	11.0	0.97	620.3	*	675.8	-55.5	-8.94	* 2184.8	15.2	0.69
219	1522	8.216	35.775	2362.	2187.	13.1	1.07	623.7	*	696.0	-72.3	-11.60	* 2168.0	19.0	0.87
220	1762	5.959	35.377	2339.	2178.	15.0	1.16	695.2	*	738.6	-43.4	-6.25	* 2167.9	10.1	0.46
221	1910	4.924	35.210	2324.	2166.	16.8	1.19		*	741.6					
222	2210	4.021	35.089	2331.	2174.	22.2	1.28	719.4	*	749.7	-30.3	-4.21	* 2167.3	6.7	0.31
223	2721	3.096	34.978	2331.	2177.	31.1	1.36	702.1	*	763.2	-61.1	-8.70	* 2163.3	13.7	0.63
224	2845	2.949	34.963	2335.	2183.	33.5	1.38	746.7	*	775.1	-28.4	-3.80	* 2177.0	6.0	0.28

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-52.1	16.53
DELPCO2/PCO2	22	-9.9	3.43
DELTCO2	22	17.5	6.64
DELTCO2/TCO2	22	0.8	0.32

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIC	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	114	42 6.5 N	10 19.1 W	25 6 81	2785

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	15	16.776	35.642	2344.	2057.	0.9	0.04	348.9	*	372.6	-23.7	-6.79	*	2043.3	13.7	0.66
170	17	16.851H	35.658					347.7	*							
172	27	16.826H	35.656					345.9	*							
174	37	13.719H	35.609					371.4	*							
176	47	12.927H	35.631					321.6	*							
202	58	14.144	35.624	2340.	2072.	1.1	0.07	366.0	*	407.5	-41.5	-11.34	*	2050.2	21.8	1.05
203	90	12.598	35.632	2334.	2103.	1.8	0.36	461.8	*	492.2	-30.4	-6.59	*	2090.9	12.1	0.58
204	122	12.283	35.624	2333.	2107.	2.4	0.43	470.9	*	505.3	-34.4	-7.31	*	2093.7	13.3	0.63
205	369	11.145	35.542		2132.	4.6	0.71	551.5	*							
206	432	10.953	35.538	2330.	2136.	5.2	0.77	560.4	*	603.2	-42.8	-7.64	*	2122.9	13.1	0.61
207	528	10.806	35.585	2337.	2150.	6.3	0.85	592.5	*	632.0	-39.5	-6.67	*	2138.7	11.3	0.53
208	628	10.883	35.721	2360.	2167.	7.5	0.92	601.3	*	624.4	-23.1	-3.84	*	2160.3	6.7	0.31
209	852	11.180	36.043	2375.	2183.	8.6	0.92	603.9	*	640.0	-36.1	-5.98	*	2172.6	10.4	0.48
210	983	10.900	36.061	2379.	2187.	9.3	0.94	605.9	*	642.2	-36.3	-5.99	*	2176.6	10.4	0.48
211	1073	10.565	36.068	2378.	2192.	9.7	0.95	618.5	*	664.4	-45.9	-7.42	*	2179.3	12.7	0.58
212	1182	9.958	35.993	2375.	2191.	10.2	0.98	624.7	*	669.6	-44.9	-7.18	*	2178.8	12.2	0.56
213	1301	8.217	35.669	2351.	2178.	11.3	1.06	666.8	*	697.0	-30.2	-4.53	*	2170.4	7.6	0.35
214	1422	6.357	35.342	2334.	2170.	12.5	1.11	697.6	*	721.1	-23.5	-3.37	*	2164.5	5.5	0.25
215	1502	5.298	35.162	2316.	2159.	12.9	1.14	725.9	*	740.8	-14.9	-2.05	*	2155.7	3.3	0.15
216	1608	4.621	35.067	2312.	2157.	13.4	1.14	717.6	*	746.3	-28.7	-4.00	*	2150.6	6.4	0.29
217	1719	5.069	35.183	2320.	2162.	14.5	1.14	710.2	*	738.7	-28.5	-4.01	*	2155.6	6.4	0.30
218	1972	4.150	35.060	2316.	2162.	17.6	1.19	714.4*	*	753.7	-39.3	-5.51	*	2153.3	8.7	0.40
219	2119	3.696	35.004	2313.	2161.	19.4	1.20	723.7	*	760.7	-37.0	-5.11	*	2153.0	8.0	0.37
220	2289	3.505	34.994	2322.	2169.	22.0	1.24	722.3	*	761.6	-39.3	-5.44	*	2160.4	8.6	0.40
221	2387	3.428	35.001	2323.	2170.	24.7	1.27	730.1	*	762.7	-32.6	-4.46	*	2162.9	7.1	0.33

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	114	42 6.5 N	10 19.1 W	25 6 81	2785

			MEASURED QUANTITIES						CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
222	2485	3.229	34.976	2325.	2171.	26.0	1.27	727.1	758.5	-31.4	-4.32	2164.1	6.9	0.32
223	2581	3.146	34.968	2325.	2172.	27.2	1.29	734.5	763.7	-29.2	-3.98	2165.7	6.3	0.29
224	2678	3.035	34.965			30.0	1.32	733.1						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-33.3	7.71
DELPCO2/PCO2	22	-5.6	1.94
DELTCO2	22	9.7	3.92
DELTCO2/TCO2	22	0.5	0.19

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TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	115	46 0.0 N	10 59.0 W	27 6 81	4803

			MEASURED QUANTITIES					*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	16	15.576	35.555	2333.	2059.	2.0	0.06	374.7	*	392.8	-18.1	-4.82	*	2049.4	9.6	0.46
202	34	15.479	35.553	2332.	2062.	1.8	0.06	367.0	*	400.0	-33.0	-9.00	*	2044.5	17.5	0.85
203	43	14.507	35.547	2333.	2070.	2.0	0.08	377.8	*	414.8	-37.0	-9.81	*	2051.2	18.8	0.91
204	71	12.643	35.587	2331.	2095.	3.2	0.26	471.1	*	477.5	-6.4	-1.35	*	2092.5	2.5	0.12
205	162	11.826	35.595	2330.	2108.	3.6	0.46	479.4	*	515.4	-36.0	-7.50	*	2094.4	13.6	0.64
206	379	11.091	35.518	2323.	2129.	5.5	0.71	548.6	*	599.2	-50.6	-9.22	*	2113.3	15.7	0.74
207	609	10.569	35.515	2324.	2145.	7.2	0.86	595.2	*	654.9	-59.7	-10.03	*	2128.5	16.5	0.77
208	742	10.567	35.645	2337.	2160.	9.0	0.98	624.7	*	672.6	-47.9	-7.66	*	2147.3	12.7	0.59
209	804	10.549	35.746	2345.	2169.	9.5	0.99	622.8*	*	682.1	-59.3	-9.52	*	2153.3	15.7	0.72
210	874	10.489	35.797	2351.	2174.	9.9	1.00	631.9	*	682.1	-50.2	-7.95	*	2160.8	13.2	0.61
211	993	10.103	35.801	2355.	2182.	10.6	1.04	642.9	*	700.7	-57.8	-8.99	*	2167.2	14.8	0.68
212	1144	9.520	35.786	2355.	2184.	11.2	1.04	654.1	*	708.9	-54.8	-8.38	*	2170.2	13.8	0.63
213	1254	8.629	35.670	2351.	2182.	12.1	1.08	680.8	*	714.0	-33.2	-4.88	*	2173.9	8.1	0.37
214	1543	5.743	35.233	2321.	2167.	13.7	1.16	706.4	*	759.0	-52.6	-7.45	*	2155.3	11.7	0.54
215	1762	4.666	35.085	2310.	2159.	14.9	1.16	720.0	*	764.7	-44.7	-6.22	*	2149.3	9.7	0.45
216	1999	3.959	35.014	2309.	2161.	17.8	1.19	730.6	*	777.9	-47.3	-6.48	*	2150.9	10.1	0.47
217	2129	3.640	34.988	2310.	2159.	19.3	1.20	723.4	*	764.1	-40.7	-5.62	*	2150.2	8.8	0.41
218	2258	3.404	34.975	2310.	2162.	21.8	1.23	733.1*	*	778.9	-45.8	-6.25	*	2152.3	9.7	0.45
140	2463	3.182H	34.971	2324.	2173.	28.1	1.30	722.4	*	773.4	-51.0	-7.06	*	2161.9	11.1	0.51
219	2652	3.021	34.961	2328.	2175.	31.3	1.34	737.4	*	765.9	-28.5	-3.87	*	2168.9	6.1	0.28
142	2954	2.793H	34.941	2335.	2181.	34.9	1.37	725.3	*	765.9	-40.6	-5.60	*	2172.1	8.9	0.41
220	3191	2.685	34.932	2336.	2184.	38.2	1.41	745.8	*	776.5	-30.7	-4.11	*	2177.5	6.5	0.30
143	3447	2.596H	34.923	2340.	2191.	39.9	1.42	751.0	*	793.2	-42.2	-5.62	*	2182.2	8.8	0.40
221	3793	2.544	34.913	2342.	2195.	43.1	1.47	757.1	*	805.4	-48.3	-6.38	*	2185.0	10.0	0.45
145	3941	2.536H	34.910	2345.	2193.	43.5	1.45		*	781.7						

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	115	46 0.0 N	10 59.0 W	27 6 81	4803

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
222	4197	2.514	34.906	2345.	2199.	44.9	1.48	755.3	812.0	-56.7	-7.51	2187.3	11.7	0.53
146	4337	2.514H	34.902	2345.	2196.	44.5	1.46	748.5	796.7	-48.2	-6.44	2185.9	10.1	0.46
148	4658	2.529H	34.900	2342.	2196.	45.4	1.46		810.3					
226	4692	2.526	34.906D	2345.	2201.	46.1	1.50	743.4	822.7	-79.3	-10.66	2184.6	16.4	0.74
224	4820	2.537	34.900	2345.	2199.	46.1	1.50		812.5					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	27	-44.5	14.07
DELPCO2/PCO2	27	-7.0	2.12
DELTCO2	27	11.6	3.76
DELTCO2/TCO2	27	0.5	0.18

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	116	49 6.0 N	12 56.0 W	28 6 81	1973

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	8	14.718	35.569	2357.	2069.	1.2	0.11	365.2	*	374.5	-9.3	-2.55	* 2063.8	5.2	0.25
102	50	13.061	35.557	2350.	2095.	2.4	0.30	418.3	*	439.2	-20.9	-5.00	* 2085.3	9.7	0.46
103	77	12.478	35.571	2328.	2077.	2.6	0.36	435.9	*	440.7	-4.8	-1.11	* 2074.9	2.1	0.10
104	113	12.097	35.578	2331.	2097.	2.8	0.40	446.4	*	482.9	-36.5	-8.18	* 2082.0	15.0	0.72
105	131	11.931	35.577		2110.	2.9	0.45	459.0	*						
106	182	11.515	35.560	2324.	2110.	3.5	0.56	517.8*	*	535.7	-17.9	-3.45	* 2103.8	6.2	0.29
107	340	10.994	35.502	2310.	2122.	4.5	0.68	527.8	*	613.2	-85.4	-16.19	* 2095.4	26.6	1.25
108	482	10.422	35.439	2322.	2134.	5.7	0.81	567.5*	*	619.0	-51.5	-9.07	* 2118.8	15.2	0.71
109	570	10.113	35.422	2309.	2136.	6.5	0.90	601.3	*	670.1	-68.8	-11.44	* 2117.5	18.5	0.86
110	648	9.868	35.421	2322.	2149.	7.8	0.99	628.8	*	677.3	-48.5	-7.72	* 2136.4	12.6	0.59
111	712	9.642	35.450	2323.	2157.	8.9	1.05	663.0	*	708.0	-45.0	-6.79	* 2146.0	11.0	0.51
112	819	9.137	35.460	2326.	2167.	10.1	1.11	680.5	*	741.4	-60.9	-8.95	* 2152.8	14.2	0.66
113	887	8.946	35.491	2331.	2165.	10.5	1.12	683.4*	*	713.6	-30.2	-4.42	* 2157.8	7.2	0.33
114	937	8.510	35.449U	2331.	2172.	10.8	1.14	722.7	*	744.0	-21.3	-2.95	* 2167.2	4.8	0.22
115	1005	8.557	35.528	2335.	2174.	11.0	1.10	686.5	*	737.9	-51.4	-7.49	* 2162.0	12.0	0.55
116	1083	7.964	35.473	2335.	2174.	11.5	1.12	694.5	*	737.6	-43.1	-6.21	* 2164.0	10.0	0.46
117	1212	6.706	35.304	2331.	2174.	12.3	1.15	715.5	*	750.9	-35.4	-4.95	* 2166.1	7.9	0.36
118	1365	5.493	35.152	2315.	2162.	12.6	1.16	720.6	*	758.6	-38.0	-5.27	* 2153.7	8.3	0.38
119	1578	4.206	34.989	2293.	2159.	12.4	1.14	721.6	*	839.8	-118.2	-16.38	* 2135.2	23.8	1.10
120	1714	3.990	34.970	2298.	2149.	12.7	1.14	718.6	*	765.1	-46.5	-6.46	* 2139.0	10.0	0.47
121	1788	3.933	34.973	2307.	2148.	13.5	1.14	707.5	*	723.9	-16.4	-2.31	* 2144.3	3.7	0.17
122	1889	3.738	34.964	2303.	2153.	14.2	1.14	706.9	*	763.2	-56.3	-7.96	* 2140.7	12.3	0.57
123	1937	3.680	34.965	2295.	2157.	15.0	1.15	718.8	*	819.6	-100.8	-14.03	* 2136.3	20.7	0.96
124	1987	3.654	34.965	2304.	2156.	15.4	1.16	715.7	*	773.8	-58.1	-8.11	* 2143.5	12.5	0.58

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-46.3	27.43
DELPCO2/PCO2	23	-7.3	4.05
DELTCO2	23	11.7	6.11
DELTCO2/TCO2	23	0.5	0.29

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	117	49 30.5 N	16 42.5 W	29 6 81	4835

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	CC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	20	14.808	35.490	2330.	2043.	0.4	0.07	342.0	*	366.7	-24.7	-7.21	*	2028.6	14.4	0.71
202	51	12.982	35.545	2330.	2086.	1.6	0.37	419.3*	*	457.3	-38.0	-9.06	*	2069.1	16.9	0.81
203	105	12.289	35.559	2327.	2092.	2.7	0.46	443.1	*	479.0	-35.9	-8.09	*	2077.1	14.9	0.71
204	156	11.903	35.525	2324.	2101.	3.1	0.52	468.3	*	509.5	-41.2	-8.80	*	2085.2	15.8	0.75
205	244	11.188	35.4100	2319.	2115.	5.4	0.72	521.9	*	563.2	-41.3	-7.92	*	2101.2	13.8	0.65
206	333	11.318	35.510	2322.	2109.	4.4	0.65	507.2	*	537.9	-30.7	-6.05	*	2098.2	10.8	0.51
207	463	10.865	35.465	2322.	2114.	4.8	0.71	523.0	*	552.4	-29.4	-5.62	*	2104.1	9.9	0.47
208	584	10.364	35.416	2320.	2120.	5.8	0.82	564.1	*	603.9	-39.8	-7.06	*	2116.0	12.0	0.57
209	686	9.852	35.361	2329.	2145.	7.0	0.92	596.3	*	636.6	-40.3	-6.76	*	2133.6	11.4	0.53
210	792	9.168	35.316	2317.	2154.	9.4	1.07	667.5	*	716.0	-48.5	-7.26	*	2142.4	11.6	0.54
211	883	8.522	35.321	2297.	2149.	10.7	1.15	697.2	*	775.6	-78.4	-11.25	*	2131.8	17.2	0.80
212	1008	7.808	35.355	2325.	2170.	11.4	1.16	721.0	*	757.7	-36.7	-5.09	*	2161.9	8.1	0.37
213	1082	7.640	35.379	2328.	2171.	11.5	1.15	708.4	*	750.5	-42.1	-5.95	*	2161.5	9.5	0.44
214	1186	6.251	35.180	2315.	2165.	11.9	1.18	733.8	*	773.1	-39.3	-5.36	*	2156.6	8.4	0.39
215	1269	5.406	35.078	2307.	2159.	11.7	1.17	733.6	*	776.9	-43.3	-5.91	*	2149.8	9.2	0.43
216	1403	4.895	35.037	2306.	2158.	11.7	1.15	757.2	*	775.8	-18.6	-2.45	*	2154.2	3.8	0.18
217	1579	4.214	34.958	2288.		11.4	1.14	722.2	*							
218	2116	3.587	34.952	2299.	2149.	14.2	1.13	721.3	*	760.6	-39.3	-5.45	*	2140.5	8.5	0.40
219	2397	3.366	34.965	2310.	2158.	19.7	1.20	705.2*	*	758.7	-53.5	-7.58	*	2146.2	11.8	0.55
220	2767	3.028	34.956	2327.	2169.	28.2	1.29	736.6	*	741.8	-5.2	-0.70	*	2167.9	1.1	0.05
221	3206	2.763	34.938	2332.	2181.	34.6	1.37	736.0	*	778.2	-42.2	-5.74	*	2172.0	9.0	0.41
222	3662	2.608	34.921	2338.	2189.	40.5	1.43	751.1	*	792.4	-41.3	-5.49	*	2180.4	8.6	0.39
223	3864	2.568	34.914			42.3	1.46	795.2*	*							
224	4272	2.546	34.907	2341.	2195.	44.5	1.49	758.5	*	810.4	-51.9	-6.84	*	2184.4	10.6	0.49
231	4787	2.566	34.9020					749.3	*							

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

CTD	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	117	49 30.5 N	16 42.5 W	29 6 81	4835

	MEASURED QUANTITIES								*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
232	4794	2.566	34.902D	2319.	2198.	45.4	1.50		*	789.5					
233	4808	2.567	34.902D	2344.	2193.	45.6	1.50		*	786.9					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-39.2	13.52
DELPCO2/PCO2	22	-6.4	2.12
DELTCO2	22	10.8	3.80
DELTCO2/TCO2	22	0.5	0.18

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	118	49 44.5 N	21 59.5 W	30 6 81	4239

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	* PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	11	15.530	35.578	2335.	2048.	1.2	0.11	353.9	* 369.2	-15.3	-4.34	* 2039.2	8.8	0.43
203	17	15.543	35.577	2342.	2059.	1.2	0.11	347.5	* 378.8	-31.3	-9.00	* 2041.1	17.9	0.87
204	21	15.534	35.577	2335.	2113.	1.1	0.11	350.5	* 514.8	-164.3	-46.89	* 2037.2	75.8	3.59
205	60	13.364	35.566		2118.	1.2	0.29	392.0	*					
206	140	12.173	35.508	2334.	2103.	3.2	0.50	454.7	* 491.8	-37.1	-8.15	* 2088.1	14.9	0.71
207	273	11.090	35.385	2328.	2117.	5.7	0.72	513.9	* 544.7	-30.8	-5.99	* 2106.4	10.6	0.50
208	402	10.463	35.376	2327.	2142.	7.7	0.94	597.9	* 632.5	-34.6	-5.78	* 2132.2	9.8	0.46
209	506	9.112	35.196	2319.	2156.	9.8	1.11	660.7	* 715.3	-54.6	-8.26	* 2142.8	13.2	0.61
210	603	8.017	35.105	2319.	2170.	11.6	1.24	738.3	* 779.7	-41.4	-5.61	* 2161.2	8.8	0.40
211	669	7.361	35.080	2316.	2168.	12.0	1.25	744.0	* 782.5	-38.5	-5.18	* 2159.9	8.1	0.37
212	807	6.270	35.056	2314.	2167.	12.1	1.24	761.2	* 786.2	-25.0	-3.28	* 2161.9	5.1	0.24
213	913	5.777	35.081			11.9	1.20	741.7	*					
214	982	5.346	35.050	2327.	2177.	11.8	1.19	747.3	* 777.5	-30.2	-4.04	* 2170.6	6.4	0.29
215	1101	4.834	35.011			11.7	1.17	735.8	*					
216	1295	4.182	34.952	2312.	2162.	11.2	1.14	721.3	* 767.2	-45.9	-6.37	* 2152.1	9.9	0.46
217	1457	3.857	34.920	2306.	2155.	11.1	1.12	722.0	* 759.0	-37.0	-5.12	* 2147.0	8.0	0.37
218	1624	3.705	34.915	2309.	2155.	11.2	1.12	718.9	* 746.0	-27.1	-3.77	* 2149.0	6.0	0.28
219	1854	3.627	34.922	2306.	2151.	11.6	1.11	712.6	* 740.2	-27.6	-3.87	* 2144.9	6.1	0.29
220	2105	3.561	34.941	2307.	2153.	12.8	1.12	711.7	* 745.8	-34.1	-4.80	* 2145.4	7.6	0.35
221	2462	3.342	34.955	2311.	2157.	15.3	1.13	712.2	* 748.2	-36.0	-5.06	* 2149.0	8.0	0.37
222	2832	3.044	34.958	2324.	2170.	22.0	1.20	730.7	* 757.1	-26.4	-3.61	* 2164.3	5.7	0.26
223	4032	2.577	34.913	2352.	2202.	43.0	1.46	755.4	* 795.7	-40.3	-5.34	* 2193.6	8.4	0.38
224	4229	2.576	34.911	2356.	2205.	43.9	1.47	760.4	* 793.2	-32.8	-4.31	* 2198.1	6.9	0.31

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	20	-40.5	29.54
DELPCO2/PCO2	20	-7.4	9.18
DELTCO2	20	12.3	14.90
DELTCO2/TCO2	20	0.6	0.71

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIC	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	119	50 52.5 N	26 23.6 W	2 7 81	4107

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	8	14.144	35.330			0.9	0.21	362.5	*						
102	19	14.044	35.329			0.9	0.21	353.3	*						
103	85	11.653	35.395			1.2	0.47	433.9	*						
104	130	11.128	35.366			2.9	0.63	490.2	*						
107	386	6.954	34.903			11.9	1.25	740.9*	*						
110	826	4.372	34.915			11.4	1.17	745.3	*						
113	1997	3.523	34.932			12.3	1.11	698.6	*						
123	4118	2.674	34.923			39.8	1.42	760.2	*						
124	4118	2.674	34.923			40.1	1.42	748.9*	*						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	120	51 48.8 N	26 46.0 W	2 7 81	3844

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	8	12.626	35.113	2326.	2061.	0.9	0.20	358.0	403.8	-45.8	-12.79	2036.7	24.3	1.18
202	45	11.236	35.125	2323.	2085.	1.2	0.37	422.4	463.9	-41.5	-9.83	2066.9	18.1	0.87
203	68	10.941	35.180	2330.	2105.	1.5	0.49	457.9	501.1	-43.2	-9.44	2088.0	17.0	0.81
204	116	10.149	35.193	2322.	2114.	3.3	0.65	504.1	547.9	-43.8	-8.68	2098.8	15.2	0.72
205	210	8.995	35.068	2326.	2149.	7.7	0.91	606.8	656.9	-50.1	-8.25	2135.4	13.6	0.63
206	297	7.559	34.902	2306.	2147.	9.4	1.05	666.9	720.6	-53.7	-8.05	2134.3	12.7	0.59
207	350	6.666	34.827	2306.	2156.	10.0	1.10		761.1					
208	423	6.057	34.876	2306.	2166.	11.7	1.23		813.6					
209	522	5.511	34.925	2310.	2173.	12.0	1.22		832.6					
210	602	4.844	34.903	2307.	2166.	11.6	1.19		809.2					
211	666	4.638	34.907	2293.	2157.	11.6	1.18		828.2					
212	765	4.238	34.893		2162.	11.1	1.16							
214	1148	3.777	34.902	2302.	2157.	11.2	1.13		785.4					
216	1800	3.527	34.920	2306.	2156.	11.9	1.11		763.8					
218	2419	3.296	34.949	2312.	2161.	14.5	1.12		762.8					
220	3001	2.958	34.958	2323.	2170.	20.9	1.17		760.8					
221	3390	2.813	34.950	2343.	2203.	26.6	1.23		838.0					
223	3793	2.671	34.933	2348.	2203.	37.3	1.37		817.3					
224	3840	2.660	34.927	2345.	2195.	38.6	1.39		790.5					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	6	-46.3	4.23
DELPCO2/PCO2	6	-9.5	1.60
DELTCO2	6	16.8	3.82
DELTCO2/TCO2	6	0.8	0.19

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	121	52 38.7 N	27 0.5 W	3 7 81	3761

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
575	10	12.276H	35.196	2328.	2073.	0.6	0.26	395.6	426.8	-31.2	-7.90	2058.0	15.0	0.72
576	72	10.483H	35.245	2324.	2110.	2.3	0.58	487.5	531.2	-43.7	-8.97	2094.2	15.8	0.75
577	128	10.223H	35.229	2323.	2121.	4.8	0.69	521.7	568.6	-46.9	-8.98	2105.5	15.5	0.73
201	197	9.763	35.164	2320.	2129.	6.3	0.79	555.7	603.5	-47.8	-8.60	2114.5	14.5	0.68
202	257	9.008	35.080	2318.	2145.	8.3	0.98		669.7					
204	316	7.934	34.974	2313.	2161.	10.6	1.17	702.5	758.6	-56.1	-7.98	2148.6	12.4	0.58
203	316	7.934	34.969	2312.	2162.	10.4	1.15		768.0					
206	407	6.933	34.930	2312.	2168.	11.8	1.25	755.3	797.8	-42.5	-5.63	2159.3	8.7	0.40
205	407	6.933	34.932	2313.	2173.	11.7	1.25	756.2	819.0	-62.8	-8.30	2160.4	12.6	0.58
207	457	6.189	34.918	2311.	2178.	12.4	1.28	771.0	855.8	-84.8	-11.00	2161.7	16.3	0.75
208	508	5.734	34.912	2312.	2173.	12.5	1.27	779.9	823.3	-43.4	-5.56	2164.5	8.5	0.39
209	508	5.734	34.911	2311.	2178.	12.3	1.27	773.6	855.8	-82.2	-10.62	2162.2	15.8	0.72
210	558	5.297	34.913	2305.	2169.	11.8	1.23	768.5	835.4	-66.9	-8.70	2156.0	13.0	0.60
211	608	5.055	34.922	2311.	2174.	11.8	1.22	763.2	833.7	-70.5	-9.24	2160.1	13.9	0.64
445	697	4.660H	34.928	2312.	2172.	11.4	1.18		817.7					
212	799	4.300	34.920	2311.	2167.	11.4	1.18	738.0	796.7	-58.7	-7.95	2154.8	12.2	0.56
446	841	4.044H	34.909	2309.	2164.	11.0	1.14		789.7					
447	988	3.950H	34.906	2307.	2167.	11.1	1.13		813.7					
213	1063	3.889	34.905	2307.	2166.	11.2	1.14	730.8	809.1	-78.3	-10.72	2149.9	16.1	0.75
214	1395	3.664	34.909	2307.	2165.	11.4	1.13	732.8	803.8	-71.0	-9.70	2150.3	14.7	0.68
448	1477	3.630H	34.910	2304.	2158.	11.2	1.11	722.1	781.3	-59.2	-8.19	2145.4	12.6	0.58
215	1676	3.561	34.910	2308.	2162.	11.6	1.12	718.7	783.6	-64.9	-9.03	2148.2	13.8	0.64
216	1994	3.489	34.930	2309.	2165.	12.4	1.12	716.0	795.0	-79.0	-11.04	2148.3	16.7	0.77
217	2362	3.303	34.947	2314.	2165.	13.8	1.11	782.8*	773.3	9.5	1.21	2166.9	-1.9	-0.09
218	2725	3.051	34.959	2309.	2160.	15.0	1.10	761.3	770.6	-9.3	-1.22	2158.1	1.9	0.09

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	121	52 38.7 N	27 0.5 W	3 7 81	3761

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
219	2907	2.965	34.962	2317.	2172.	16.3	1.11	721.5	795.4	-73.9	-10.24	2156.4	15.6	0.72
220	3205	2.860	34.965	2316.	2172.	19.0	1.14	731.0	800.6	-69.6	-9.52	2157.5	14.5	0.67
221	3503	2.849	34.963	2324.	2180.	20.4	1.15	735.0	804.8	-69.8	-9.49	2165.5	14.5	0.67
226	3593	2.847	34.962	2318.	2173.	21.1	1.16	739.5	797.1	-57.6	-7.79	2161.0	12.0	0.55
231	3676	2.828	34.960	2327.	2182.	23.0	1.18		802.5					
236	3702	2.802	34.956	2338.	2182.	24.8	1.21		755.6					
224	3707	2.791	34.951	2333.	2191.	26.8	1.23		821.9					
223	3708	2.791	34.951					749.6						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-56.7	22.04
DELPCO2/PCO2	24	-8.1	2.83
DELTCO2	24	12.7	4.40
DELTCO2/TCO2	24	0.6	0.20

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	122	52 10.0 N	30 53.7 W	4 7 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
170	10	10.9 1	34.893					422.7						
301	14	10.711	34.808	2300.	2072.	2.0	0.44	436.7	476.8	-40.1	-9.18	2055.5	16.5	0.80
173	23	10.892H	34.893					423.4						
175	30	10.719H	34.897					444.1						
179	49	9.920H	35.104					481.0						
302	49	10.156	35.135	2319.	2095.	2.0	0.58	473.0	499.7	-26.7	-5.64	2084.8	10.2	0.49
303	65	9.473	35.069	2315.	2108.	3.7	0.68	511.0	546.9	-35.9	-7.02	2095.7	12.3	0.58
304	79	8.569	34.970	2303.	2117.	6.4	0.80	572.3	610.2	-37.9	-6.63	2105.9	11.1	0.52
305	99	7.992	34.909	2301.	2123.	7.2	0.85	594.4	638.5	-44.1	-7.43	2110.8	12.2	0.58
306	135	7.286	34.867	2298.	2136.	9.4	1.05	672.5	702.3	-29.8	-4.44	2128.9	7.1	0.33
307	175	6.536	34.815	2298.	2149.	10.2	1.11	704.1	761.9	-57.8	-8.21	2136.4	12.6	0.59
308	217	5.988	34.810	2297.	2155.	11.4	1.20	750.2	796.7	-46.5	-6.20	2145.5	9.5	0.44
309	258	5.742	34.828	2300.	2164.	12.1	1.24	767.8	831.2	-63.4	-8.26	2151.6	12.4	0.57
310	346	4.805	34.836	2304.	2167.	11.5	1.19	760.1	827.4	-67.3	-8.85	2153.7	13.3	0.61
311	387	4.636	34.843	2299.	2160.	11.2	1.17	751.1	814.1	-63.0	-8.39	2147.3	12.7	0.59
312	439	4.632	34.889	2297.	2159.	11.3	1.18	755.2	818.9	-63.7	-8.43	2146.3	12.7	0.59
313	458	4.435	34.868	2299.		11.1	1.16	752.4						
314	533	4.213	34.860	2299.	2155.	11.0	1.16	754.5	788.6	-34.1	-4.52	2148.0	7.0	0.32
315	679	3.898	34.874	2300.	2157.	10.9	1.14	738.5	793.8	-55.3	-7.49	2145.6	11.4	0.53
316	842	3.702	34.870	2297.	2150.	10.6	1.12	738.0	772.1	-34.1	-4.61	2142.8	7.2	0.33
317	1242	3.584	34.892	2299.	2152.	11.1	1.11	724.9*	773.8	-48.9	-6.75	2141.6	10.4	0.48
318	1881	3.447	34.937	2303.	2147.	13.0	1.12	716.9	734.6	-17.7	-2.47	2143.1	3.9	0.18
319	2262	3.284	34.946			13.8	1.10	715.4						
545	2464	3.173H	34.956	2306.	2156.	13.8	1.09		764.4					
320	2663	3.085	34.960	2306.	2158.	14.1	1.08	721.9	774.0	-52.1	-7.21	2146.8	11.2	0.52

* DELTA PCO2 > 0.5 %

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TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	122	52 10.0 N	30 53.7 W	4 7 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
546	3149	2.912H	34.959	2307.	2160.	16.2	1.10		779.5					
321	3426	2.858	34.956	2313.	2161.	17.3	1.10	727.4	759.1	-31.7	-4.36	2154.1	6.9	0.32
322	3510	2.841	34.954	2309.	2161.	17.5	1.10	725.5	776.4	-50.9	-7.01	2150.1	10.9	0.50
547	3639	2.839H	34.955	2310.	2162.	17.5	1.10		776.4					
323	3901	2.804	34.947	2310.	2160.	18.1	1.10	725.0	766.9	-41.9	-5.78	2151.0	9.0	0.42
548	4030	2.814H	34.948	2311.	2163.	17.7	1.10		776.5					
324	4322	2.841	34.945	2309.	2160.	18.1	1.10	725.9	771.2	-45.3	-6.24	2150.3	9.7	0.45

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-44.9	13.10
DELPCO2/PCO2	22	-6.6	1.69
DELTCO2	22	10.5	2.73
DELTCO2/TCO2	22	0.5	0.13

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	123	52 41.3 N	33 39.7 W	5 7 81	4235

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	9	9.974	34.690	2296.	2066.	2.4	0.38	422.2	*	468.5	-46.3	-10.96	* 2046.4	19.6	0.95
102	58	8.092	34.728	2295.	2091.	2.4	0.58	511.4	*	542.2	-30.8	-6.02	* 2080.6	10.4	0.50
103	105	6.040	34.762	2293.	2128.	6.7	0.91	622.4	*	684.4	-62.0	-9.97	* 2112.2	15.8	0.74
104	277	5.997	34.962	2302.	2142.	8.9	1.05	676.8*	*	715.2	-38.4	-5.67	* 2133.0	9.0	0.42
105	399	5.305	34.935	2303.	2161.	10.7	1.15	735.5	*	801.9	-66.4	-9.03	* 2147.3	13.7	0.63
106	479	4.542	34.876	2298.	2155.	10.8	1.15	757.7	*	792.8	-35.1	-4.63	* 2147.9	7.1	0.33
107	701	4.250	34.927	2302.	2162.	11.4	1.14	748.2	*	811.3	-63.1	-8.43	* 2149.2	12.8	0.59
108	1092	3.658	34.912	2296.	2146.	11.2	1.10	722.9	*	757.4	-34.5	-4.77	* 2138.6	7.4	0.35
109	1430	3.541	34.932	2302.	2153.	11.8	1.09	708.5	*	766.1	-57.6	-8.13	* 2140.4	12.6	0.58
110	1643	3.413	34.955	2306.	2152.	12.5	1.08	716.2	*	744.7	-28.5	-3.99	* 2145.7	6.3	0.29
111	1973	3.109	34.948	2306.	2155.	14.3	1.09	711.0	*	758.8	-47.8	-6.73	* 2144.5	10.5	0.49
112	2253	2.994	34.960	2304.	2157.	14.6	1.07	719.8	*	777.8	-58.0	-8.06	* 2144.6	12.4	0.57
113	2668	2.863	34.963	2309.	2158.	16.4	1.08	722.7	*	760.9	-38.2	-5.29	* 2149.7	8.3	0.38
114	2913	2.859	34.965	2305.	2160.	16.8	1.09	726.7	*	788.7	-62.0	-8.54	* 2146.9	13.1	0.60
115	3164	2.860	34.963	2310.	2162.	17.6	1.09	727.5	*	776.2	-48.7	-6.70	* 2151.6	10.4	0.48
116	3313	2.864	34.964	2309.	2162.	18.1	1.10	733.2	*	781.2	-48.0	-6.55	* 2151.9	10.1	0.47
117	3413	2.873	34.966	2315.	2168.	18.6	1.10	732.6	*	784.5	-51.9	-7.09	* 2157.0	11.0	0.51
118	3513	2.870	34.966	2307.	2165.	19.2	1.12	734.8	*	805.7	-70.9	-9.65	* 2150.4	14.6	0.68
119	3613	2.883	34.966	2314.	2168.	19.0	1.11	733.5	*	789.1	-55.6	-7.58	* 2156.3	11.7	0.54
120	3713	2.869	34.966	2309.	2162.	19.3	1.12	736.5	*	781.6	-45.1	-6.12	* 2152.5	9.5	0.44
121	3812	2.891	34.965	2313.	2167.	19.5	1.12	734.2	*	788.7	-54.5	-7.43	* 2155.5	11.5	0.53
127	4019	2.888	34.962			19.8	1.12	731.0	*						
128	4068	2.869	34.957	2312.	2163.	18.8	1.12		*	772.9					
130	4138	2.850	34.955			18.7	1.10	732.3	*						
135	4233	2.843	34.953	2312.	2165.	18.3	1.11	728.2	*	782.6	-54.4	-7.47	* 2153.5	11.5	0.53

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	123	52 41.3 N	33 39.7 W	5 7 81	4235

	MEASURED QUANTITIES									CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
124	4253	2.838	34.950			18.9	1.10	731.2	*						
123	4253	2.837	34.951	2307.	2159.	18.9	1.10		*	775.0					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-49.9	11.64
DELPCO2/PCO2	22	-7.2	1.77
DELTCO2	22	11.3	2.96
DELTCO2/TCO2	22	0.5	0.14

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	124	53 14.8 N	36 40.5 W	6 7 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
301	14	9.305	34.716	2289.	2058.	2.2	0.41	435.2*	*	463.6	-28.4	-6.52	*	2046.1	11.9	0.58
302	66	7.198	34.757	2291.	2105.	2.9	0.70	547.4	*	600.5	-53.1	-9.70	*	2089.0	16.0	0.76
303	90	6.226	34.797	2289.	2117.	6.1	0.91	612.7	*	654.0	-41.3	-6.75	*	2106.1	10.9	0.52
304	114	5.923	34.823	2295.	2132.	7.3	1.00	652.9	*	695.4	-42.5	-6.51	*	2121.6	10.4	0.49
305	160	5.874	34.898	2294.	2134.	8.2	1.04	696.0	*	709.8	-13.8	-1.98	*	2130.8	3.2	0.15
306	231	5.877	34.945	2296.	2144.	9.1	1.08	687.3	*	748.5	-61.2	-8.90	*	2130.2	13.8	0.64
307	291	5.575	34.936	2295.	2145.	9.9	1.13	710.7	*	757.6	-46.9	-6.60	*	2134.8	10.2	0.48
308	363	5.003	34.913	2299.	2158.	10.9	1.18	752.5*	*	804.9	-52.4	-6.97	*	2147.4	10.6	0.49
309	479	4.590	34.914	2295.	2155.	11.2	1.19	753.4	*	807.5	-54.1	-7.18	*	2144.1	10.9	0.51
310	526	4.413	34.906	2298.	2157.	11.0	1.18	759.7	*	804.0	-44.3	-5.83	*	2148.1	8.9	0.41
311	621	4.137	34.907	2297.	2149.	10.9	1.15	752.0	*	768.5	-16.5	-2.20	*	2145.6	3.4	0.16
312	948	3.739	34.919	2299.	2153.	11.1	1.12	727.5	*	779.0	-51.5	-7.08	*	2142.1	10.9	0.51
313	1076	3.651	34.921D					726.8	*							
314	1293	3.542	34.939	2300.	2149.	11.7	1.10	719.6	*	755.9	-36.3	-5.05	*	2141.1	7.9	0.37
315	1556	3.441	34.957	2296.	2147.	12.2	1.10	719.8	*	763.2	-43.4	-6.04	*	2137.6	9.4	0.44
316	1770	3.358	34.961	2304.	2155.	12.5	1.09	712.9	*	767.4	-54.5	-7.65	*	2143.2	11.8	0.55
317	1990	3.281	34.966	2298.	2145.	12.7	1.08	719.7	*	745.6	-25.9	-3.60	*	2139.3	5.7	0.26
318	2186	3.187	34.970	2303.	2155.	13.0	1.08	714.3	*	772.1	-57.8	-8.09	*	2142.5	12.5	0.58
319	2483	3.096	34.970	2301.	2152.	13.6	1.08	722.2	*	766.3	-44.1	-6.10	*	2142.5	9.5	0.44
320	2636	3.063	34.971	2303.	2159.	14.0	1.09	721.9	*	792.7	-70.8	-9.80	*	2144.1	14.9	0.69
321	2765	3.020	34.969	2299.	2151.	14.4	1.09	722.9	*	770.8	-47.9	-6.62	*	2140.8	10.2	0.48
322	2833	2.991	34.969	2306.	2163.	14.9	1.10	719.3	*	799.7	-80.4	-11.17	*	2146.1	16.9	0.78
323	2909	2.968	34.969	2300.	2152.	15.0	1.10	721.0	*	771.5	-50.5	-7.00	*	2141.2	10.8	0.50
324	2966	2.961	34.969	2306.	2161.	15.1	1.10	724.2	*	789.6	-65.4	-9.03	*	2147.2	13.8	0.64

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-47.1	15.55
DELPCO2/PCO2	23	-6.8	2.17
DELTCO2	23	10.6	3.35
DELTCO2/TCO2	23	0.5	0.16

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	125	55 0.3 N	34 40.5 W	7 7 81	2584

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	13	10.056	34.692	2286.	2050.	1.8	0.31	424.2	449.6	-25.4	-5.98	2039.0	11.0	0.54
102	58	8.134	34.722	2294.	2096.	2.3	0.59	514.8	560.3	-45.5	-8.83	2081.0	15.0	0.72
103	77	6.907	34.759	2288.	2104.	3.4	0.75	574.8	606.6	-31.8	-5.53	2094.8	9.2	0.44
104	114	6.131	34.797	2291.	2126.	6.9	0.89	634.0	683.4	-49.4	-7.79	2113.6	12.4	0.58
105	160	6.002	34.846	2289.	2124.	7.5	0.95	650.2	683.8	-33.6	-5.17	2115.7	8.3	0.39
106	220	5.835	34.872	2293.	2138.	8.6	1.02	680.8	730.9	-50.1	-7.36	2126.5	11.5	0.54
107	346	5.548	34.925	2295.	2145.	9.7	1.08	721.0	756.8	-35.8	-4.96	2137.3	7.7	0.36
109	537	4.483	34.896	2293.	2151.	10.9	1.1 I	755.5						
110	611	4.363	34.913	2300.	2160.	10.9	1.13	765.7	810.2	-44.5	-5.81	2151.1	8.9	0.41
111	801	3.971	34.912	2294.	2149.	10.8	1.10	737.8	780.7	-42.9	-5.81	2140.1	8.9	0.42
112	991	3.821	34.916	2299.	2154.	10.8	1.08	735.9	783.1	-47.2	-6.42	2144.1	9.9	0.46
113	1211	3.616	34.914	2297.	2146.	10.7	1.07	718.4	752.8	-34.4	-4.79	2138.5	7.5	0.35
114	1369	3.580	34.926	2298.	2154.	11.2	1.07	721.9	788.4	-66.5	-9.21	2140.0	14.0	0.65
115	1498	3.563	34.948	2296.	2144.	11.3	1.07	715.0	748.2	-33.2	-4.64	2136.7	7.3	0.34
116	1630	3.485	34.964	2300.	2153.	11.5	1.06	703.9	775.0	-71.1	-10.11	2137.6	15.4	0.72
117	1732	3.371	34.972	2299.	2149.	11.8	1.06	713.1	759.9	-46.8	-6.56	2138.8	10.2	0.47
118	1954	3.160	34.978	2306.	2156.	12.5	1.05	724.7	763.6	-38.9	-5.37	2147.6	8.4	0.39
119	2078	3.132	34.978	2299.	2149.	12.6	1.05	715.5	759.9	-44.4	-6.20	2139.4	9.6	0.45
120	2202	3.105	34.979	2303.	2158.	12.7	1.05	728.1	787.0	-58.9	-8.09	2145.6	12.4	0.57
121	2303	3.084	34.979	2297.	2151.	12.9	1.06	719.8	778.9	-59.1	-8.21	2138.4	12.6	0.58
122	2403	3.086	34.978	2304.	2158.	12.8	1.06	727.3	782.2	-54.9	-7.54	2146.4	11.6	0.54
123	2504	3.083	34.978	2301.	2151.	13.0	1.06	719.3	761.1	-41.8	-5.81	2141.9	9.1	0.42
124	2595	3.087	34.978	2303.	2156.	13.0	1.06	721.3	776.7	-55.4	-7.68	2144.2	11.8	0.55

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-46.0	11.39
DELPCO2/PCO2	22	-6.7	1.50
DELTCO2	22	10.6	2.33
DELTCO2/TCO2	22	0.5	0.11

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	126	57 0.2 N	32 19.8 W	8 7 81	2353

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	14	10.217	34.891	2295.	2075.	1.0	0.41	438.9	496.8	-57.9	-13.18	2051.9	23.1	1.11
202	62	8.767	34.912	2302.	2100.	3.4	0.65	511.4	554.0	-42.6	-8.33	2085.7	14.3	0.68
203	90	7.124	34.835	2296.	2121.	6.4	0.91	608.8	646.2	-37.4	-6.14	2110.9	10.1	0.47
204	146	6.705	34.892	2302.	2142.	7.7	1.00	645.6	713.5	-67.9	-10.52	2125.5	16.5	0.77
205	243	6.390	34.976	2303.	2146.	8.8	1.07	668.6	729.1	-60.5	-9.04	2131.8	14.2	0.66
206	302	6.289	35.005	2310.	2151.	8.8	1.06	671.6S	724.6	-53.0	-7.90	2138.5	12.5	0.58
207	427	5.810	34.982	2307.	2155.	9.7	1.10	700.5S	755.1	-54.6	-7.79	2142.9	12.1	0.56
208	589	5.068	34.967	2310.	2167.	11.0	1.16	749.8	801.4	-51.6	-6.88	2156.5	10.5	0.49
209	646	4.772	34.942	2305.	2165.	11.2	1.18	751.7	813.6	-61.9	-8.24	2152.5	12.5	0.58
210	776	4.399	34.947	2306.	2166.	11.1	1.15	745.0	814.3	-69.3	-9.31	2151.9	14.1	0.65
211	862	4.034	34.915	2312.	2167.	11.1	1.14	740.6	791.3	-50.7	-6.85	2156.5	10.5	0.49
212	949	4.072	34.939	2308.	2160.	11.0	1.11	732.7	774.7	-42.0	-5.73	2151.1	8.9	0.41
213	1103	3.765	34.915	2303.	2157.	10.9	1.12	724.9	781.2	-56.3	-7.77	2145.1	11.9	0.55
214	1236	3.587	34.907	2300.	2153.	10.9	1.10	719.3	774.6	-55.3	-7.68	2141.2	11.8	0.55
215	1504	3.640	34.954	2303.	2156.	11.1	1.08	712.0	776.9	-64.9	-9.12	2142.0	14.0	0.65
216	1703	3.582	34.978	2309.	2161.	10.8	1.07	711.8	774.8	-63.0	-8.85	2147.4	13.6	0.63
217	1854	3.531	34.982	2305.	2157.	10.8	1.07	711.2	773.1	-61.9	-8.71	2143.6	13.4	0.62
218	2003	3.490	34.983	2309.	2156.	11.0	1.05	712.5	751.1	-38.6	-5.42	2147.5	8.5	0.40
224	2414	3.311	34.981	2308.	2157.	11.8	1.06	713.5	760.3	-46.8	-6.56	2146.8	10.2	0.47

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	19	-54.5	9.38
DELPCO2/PCO2	19	-8.1	1.76
DELTCO2	19	12.8	3.14
DELTCO2/TCO2	19	0.6	0.15

S SINGLE ANALYSIS

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TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	127	58 29.7 N	29 59.7 W	8 7 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	10	9.580	34.986	2312.	2078.	1.1	0.45	438.2*	468.6	-30.4	-6.94	2065.3	12.7	0.61
202	26	9.567	35.002	2305.	2077.	1.2	0.48	446.6	481.2	-34.6	-7.75	2063.0	14.0	0.68
203	53	7.731	34.927	2307.	2114.	4.0	0.77	553.4	586.5	-33.1	-5.98	2103.8	10.2	0.48
204	79	6.880	34.970	2307.	2133.	5.9	0.94	610.6	658.0	-47.4	-7.76	2120.3	12.7	0.59
205	104	6.985	35.029	2314.	2139.	7.3	1.02	633.7	659.2	-25.5	-4.03	2132.3	6.7	0.31
206	154	6.603	35.028	2309.	2139.	7.5	1.01	637.5	676.8	-39.3	-6.16	2129.0	10.0	0.47
208	254	6.355	35.037	2311.	2143.	7.9	1.03	638.4	686.5	-48.1	-7.54	2130.8	12.2	0.57
210	354	6.464	35.081	2312.	2144.	8.1	1.04	645.6	687.5	-41.9	-6.49	2133.5	10.5	0.49
212	455	6.459	35.098	2315.	2149.	8.7	1.07	659.0	697.9	-38.9	-5.91	2139.4	9.6	0.44
214	624	5.933	35.070	2313.	2149.	9.2	1.08	677.8	705.5	-27.7	-4.09	2142.4	6.6	0.31
215	735	5.425	35.033	2312.	2159.	10.0	1.11	701.0	753.9	-52.9	-7.55	2147.2	11.8	0.55
216	805	5.124	35.016	2308.	2156.	10.5	1.14	723.0	756.6	-33.6	-4.65	2148.7	7.3	0.34
217	886	4.774	35.002	2307.	2158.	10.3	1.12	793.9*	769.9	24.0	3.02	2162.8	-4.8	-0.22
218	956	4.511	34.983	2304.	2156.	10.5	1.13	724.7	773.1	-48.4	-6.67	2145.7	10.3	0.48
219	1056	4.105	34.946	2309.	2161.	10.7	1.14	716.1*	774.9	-58.8	-8.20	2148.3	12.7	0.59
221	1215	3.803	34.925	2304.	2159.	10.8	1.13	724.5	786.7	-62.2	-8.58	2145.9	13.1	0.61
220	1288	3.745	34.929	2302.	2151.	10.8	1.13	745.2	756.3	-11.1	-1.49	2148.6	2.4	0.11
222	1587	3.588	34.959	2306.		11.4	1.11	708.7*						
223	1786	3.426	34.989	2307.	2155.	10.8	1.07	708.4	754.9	-46.5	-6.56	2144.7	10.3	0.48
224	1855	3.396	34.988	2307.		11.0	1.07	713.8						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	18	-36.5	19.03
DELPCO2/PCO2	18	-5.7	2.73
DELTCO2	18	9.3	4.45
DELTCO2/TCO2	18	0.4	0.21

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	130	57 40.2 N	26 14.6 W	9 7 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	5	11.295	35.000	2309.	2074.	1.9	0.36	417.9	464.6	-46.7	-11.17	2053.8	20.2	0.98
202	50	8.577	34.954	2309.	2115.	5.5	0.76	550.5	585.0	-34.5	-6.28	2104.3	10.7	0.51
203	95	7.849	34.958	2306.	2129.	7.5	0.90	600.3	645.9	-45.6	-7.59	2116.5	12.5	0.59
204	141	7.550	34.969	2308.	2134.	7.6	0.94	621.9	659.1	-37.2	-5.98	2124.2	9.8	0.46
205	195	7.135	34.959	2303.	2137.	8.2	0.98	631.0	688.8	-57.8	-9.16	2122.4	14.6	0.68
206	246	6.994	34.996	2306.	2142.	8.9	1.02	656.4	700.1	-43.7	-6.66	2131.3	10.7	0.50
207	307	6.845	35.025	2311.	2148.	9.1	1.03	655.5	707.6	-52.1	-7.95	2135.3	12.7	0.59
208	400	6.599	35.054	2309.	2151.	9.5	1.06	668.9	729.5	-60.6	-9.06	2136.7	14.3	0.66
209	503	5.748	34.987	2307.	2162.	10.9	1.13	728.9	789.5	-60.6	-8.32	2149.3	12.7	0.59
210	602	5.062	34.950	2306.	2162.	11.7	1.18	763.6	794.1	-30.5	-3.99	2155.8	6.2	0.29
211	677	4.681	34.938	2306.	2165.	11.7	1.17	757.6	809.0	-51.4	-6.79	2154.6	10.4	0.48
212	802	4.330	34.930	2302.	2161.	11.6	1.15	751.0	806.7	-55.7	-7.42	2149.7	11.3	0.52
213	996	3.983	34.914	2305.	2160.	11.4	1.12	793.4	786.9	6.5	0.82	2161.3	-1.3	-0.06
214	1230	3.784	34.909	2301.	2156.	11.2	1.11	729.7	785.1	-55.4	-7.60	2144.4	11.6	0.54
215	1499	3.603	34.904	2300.	2154.	11.2	1.10	724.9	779.1	-54.2	-7.47	2142.5	11.5	0.53
216	1768	3.570	34.924	2303.	2153.	11.6	1.09	717.4	761.9	-44.5	-6.20	2143.3	9.7	0.45
217	2053	3.520	34.959	2306.	2155.	12.2	1.07	712.5	758.7	-46.2	-6.48	2144.9	10.1	0.47
218	2168	3.392	34.966	2305.	2159.	12.6	1.07	717.7	782.9	-65.2	-9.09	2145.1	13.9	0.64
219	2292	3.240	34.973	2310.	2159.	13.0	1.07	716.3	761.7	-45.4	-6.34	2149.1	9.9	0.46
220	2336	3.173	34.971	2310.	2157.	13.7	1.07	720.7	752.4	-31.7	-4.39	2150.1	6.9	0.32
221	2497	2.946	34.965	2312.	2165.	17.6	1.10	733.0	782.8	-49.8	-6.79	2154.5	10.5	0.49
222	2646	2.816	34.967	2314.	2165.	17.8	1.09	737.3	774.0	-36.7	-4.97	2157.2	7.8	0.36
223	2743	2.738	34.973	2312.	2163.	16.2	1.07	742.0	772.9	-30.9	-4.16	2156.5	6.5	0.30
224	2802	2.718	34.973	2309.	2159.	16.1	1.07	741.6	766.4	-24.8	-3.35	2153.7	5.3	0.24

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-43.9	14.93
DELPCO2/PCO2	24	-6.5	2.37
DELTCO2	24	10.4	3.96
DELTCO2/TCO2	24	0.5	0.19

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	132	57 20.1 N	22 29.1 W	10 7 81	3025

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	13	12.376	35.232	2333.	2067.	1.0	0.25	391.2	*	405.6	-14.4	-3.69	*	2059.7	7.3	0.35
202	54	11.360	35.189	2318.	2076.	1.2	0.39	433.2	*	453.2	-20.0	-4.62	*	2067.3	8.7	0.42
203	93	10.314	35.245	2319.	2112.	4.8	0.68	516.5	*	550.9	-34.4	-6.67	*	2100.3	11.7	0.55
204	170	9.882	35.272	2319.	2128.	6.4	0.79	555.3	*	604.6	-49.3	-8.88	*	2113.0	15.0	0.70
205	241	9.496	35.245	2320.	2133.	7.4	0.87	580.4	*	619.3	-38.9	-6.71	*	2121.7	11.3	0.53
206	381	9.036	35.233	2315.		7.2	0.85	575.2	*							
207	552	7.848	35.113	2316.	2146.	9.3	1.02	645.8	*	681.8	-36.0	-5.57	*	2136.9	9.1	0.42
208	632	6.843	35.016	2304.		8.3	0.97	628.3	*							
209	761	6.878	35.061	2311.	2137.	8.5	0.97	616.7*	*	662.0	-45.3	-7.35	*	2125.0	12.0	0.56
210	1000	6.430	35.056	2308.	2137.	8.6	0.99	636.2	*	672.8	-36.6	-5.75	*	2127.6	9.4	0.44
211	1068	5.788	35.004	2309.	2165.	11.8	1.18	750.7	*	796.6	-45.9	-6.11	*	2155.6	9.4	0.43
212	1118	5.225	34.979	2307.	2166.	12.2	1.19	762.6S	*	810.8	-48.2	-6.32	*	2156.3	9.7	0.45
213	1214	4.593	34.931	2304.	2162.	11.8	1.18	754.8	*	802.5	-47.7	-6.31	*	2152.3	9.7	0.45
214	1290	4.449	34.939	2303.	2160.	11.9	1.17	757.7	*	797.6	-39.9	-5.26	*	2151.9	8.1	0.38
215	1466	4.045	34.921	2304.	2158.	11.7	1.14	741.5	*	782.0	-40.5	-5.46	*	2149.6	8.4	0.39
216	1669	3.777	34.907	2299.	2156.	11.5	1.12	731.8	*	794.3	-62.5	-8.54	*	2143.0	13.0	0.60
217	1926	3.609	34.905	2304.	2158.	11.6	1.10	720.5	*	771.9	-51.4	-7.14	*	2145.0	11.0	0.51
218	2118	3.583	34.920	2300.	2155.	12.0	1.10	716.0	*	785.0	-69.0	-9.63	*	2140.3	14.7	0.68
219	2236	3.583	34.940	2304.	2155.	12.4	1.10	707.5	*	767.3	-59.8	-8.45	*	2142.0	13.0	0.60
220	2415	3.473	34.955	2306.	2154.	13.1	1.09	710.2	*	754.3	-44.1	-6.21	*	2144.3	9.7	0.45
221	2625	3.277	34.964	2312.	2165.	14.3	1.09	716.1	*	782.2	-66.1	-9.23	*	2150.8	14.2	0.66
222	2769	3.080	34.970	2314.	2165.	16.0	1.10	727.3	*	773.7	-46.4	-6.39	*	2155.1	9.9	0.46
223	2925	2.887	34.968	2319.	2167.	18.7	1.12	731.3	*	762.6	-31.3	-4.28	*	2160.2	6.8	0.31
224	3035	2.730	34.975	2310.	2161.	15.9	1.07	738.2	*	771.7	-33.5	-4.54	*	2153.9	7.1	0.33

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-43.7	13.16
DELPCO2/PCO2	22	-6.5	1.60
DELTCO2	22	10.4	2.38
DELTCO2/TCO2	22	0.5	0.11

* DELTA PCO2 > 0.5 %

S SINGLE ANALYSIS

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	135	56 19.5 N	13 49.0 W	12 7 81	

		MEASURED QUANTITIES						CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP ITS1TU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
1/0	4	13.4 I	35.348					395.2						
1/1	10	13.050H	35.348					412.3						
1/3	21	12.97 I	35.349					392.3						
1/5	33	12.751H	35.356					402.2						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	136	56 17.7 N	13 16.5 W	12 7 81	2404

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	9	13.124	35.310	2328.	2077.	2.2	0.25	403.4	437.0	-33.6	-8.32	2061.3	15.7	0.76
102	102	10.493	35.384			4.9	0.68	521.7						
103	154	10.428	35.414	2327.	2132.	6.2	0.75	540.2	596.4	-56.2	-10.41	2114.3	17.7	0.83
104	210	10.084	35.370	2328.	2127.	6.0	0.77	546.7	576.0	-29.3	-5.37	2117.6	9.4	0.44
105	280	9.826	35.358	2324.	2130.	6.6	0.81	552.6*	598.0	-45.4	-8.22	2116.0	14.0	0.66
106	361	9.705	35.373	2324.	2119.	6.4	0.78	549.6	562.0	-12.4	-2.25	2115.0	4.0	0.19
107	512	9.499	35.363	2324.	2130.	6.5	0.79	549.4	598.2	-48.8	-8.88	2114.9	15.1	0.71
108	660	9.249	35.348	2325.		6.8	0.82	568.5						
109	761	9.031	35.332	2324.	2135.	6.8	0.83	561.9	615.1	-53.2	-9.47	2119.1	15.9	0.75
110	871	8.752	35.311	2321.	2131.	7.0	0.84	575.9	610.1	-34.2	-5.94	2120.9	10.1	0.47
111	949	8.542	35.286	2322.	2141.	7.8	0.91	603.5	643.4	-39.9	-6.62	2130.0	11.0	0.52
112	1028	8.174	35.254	2321.	2155.	9.8	1.05	663.9	703.9	-40.0	-6.03	2145.2	9.8	0.45
240	1086	7.818H	35.232	2324.	2164.	10.2	1.08	691.1	731.4	-40.3	-5.83	2154.7	9.3	0.43
113	1108	7.568	35.215	2321.	2165.	11.1	1.11	703.7	748.1	-44.4	-6.32	2155.0	10.0	0.46
114	1189	7.111	35.188	2322.		11.1	1.12	708.8						
115	1232	6.847	35.174	2321.	2167.	11.3	1.12	715.9	756.7	-40.8	-5.70	2158.0	9.0	0.42
116	1384	5.825	35.095	2316.	2165.	11.6	1.14	728.3	767.2	-38.9	-5.34	2156.6	8.4	0.39
117	1467	5.419	35.074	2314.	2162.	11.2	1.13	717.5	761.0	-43.5	-6.06	2152.5	9.5	0.44
118	1610	4.782	35.033			11.3	1.07	709.4						
119	1712	4.365	35.005	2308.	2156.	11.9	1.08	714.8	756.4	-41.6	-5.82	2146.9	9.1	0.42
241	1773	4.185H	34.993	2305.	2151.	12.3	1.09	715.3	744.8	-29.5	-4.12	2144.5	6.5	0.30
120	1895	3.863	34.986	2311.	2161.	14.1	1.10	715.9	767.8	-51.9	-7.25	2149.7	11.3	0.52
242	2018	3.541H	34.983	2316.	2162.	15.7	1.11	696.6	751.3	-54.7	-7.86	2149.7	12.3	0.57
121	2103	3.445	34.987	2313.	2163.	16.3	1.10	720.9	768.7	-47.8	-6.63	2152.7	10.3	0.48
122	2202	3.146	34.958	2318.	2167.	22.7	1.20		768.2					

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	136	56 17.7 N	13 18.5 W	12 7 81	2404

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
123	2302	2.940	34.951	2327.	2182.	28.8	1.28	703.1T	804.0	-100.9	-14.34	2160.3	21.7	0.99
248	2339	2.850H	34.945	2335.	2187.	31.8	1.31	752.3	794.0	-41.7	-5.55	2178.3	8.7	0.40
124	2414	2.798	34.942	2338.	2191.	33.5	1.34	730.3	800.7	-70.4	-9.64	2176.1	14.9	0.68

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-45.2	16.25
DELPCO2/PCO2	23	-7.0	2.40
DELTCO2	23	11.5	3.87
DELTCO2/TCO2	23	0.5	0.18

T QUESTIONABLE DUE TO THERMAL DISEQUILIBRIUM

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	137	56 6.8 N	12 45.6 W	13 7 81	2647

		MEASURED QUANTITIES							*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
240	19	12.730H	35.285	2319.	2066.	0.8	0.25	405.7	*	429.1	-23.4	-5.76	2055.0	11.0	0.53
241	198	9.992H	35.367	2326.	2129.	4.7	0.74	550.0	*	588.4	-38.4	-6.98	2117.0	12.0	0.57
242	299	9.725H	35.370	2330.	2126.	5.3	0.76	551.8	*	567.1	-15.3	-2.78	2121.1	4.9	0.23
243	494	9.426H	35.364	2322.	2131.	5.9	0.79	554.1	*	607.2	-53.1	-9.58	2114.8	16.2	0.76
244	691	9.004H	35.328	2322.	2134.	6.1	0.83	574.3	*	617.7	-43.4	-7.56	2121.2	12.8	0.60
245	835	8.5 1	35.292	2323.	2141.	7.1	0.89	572.2	*	639.8	-67.6	-11.82	2121.5	19.5	0.91
246	982	7.9 1	35.248	2319.	2144.	8.5	0.98	639.0	*	665.4	-26.4	-4.13	2137.1	6.9	0.32
247	1178	6.816H	35.173	2318.	2170.	11.0	1.13	689.7*	*	784.6	-94.9	-13.75	2149.1	20.9	0.96
248	1473	4.868H	35.017	2312.	2166.	11.4	1.13	723.0	*	787.9	-64.9	-8.98	2152.2	13.8	0.64

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	9	-47.5	23.91
DELPCO2/PCO2	9	-7.9	3.33
DELTCO2	9	13.1	4.98
DELTCO2/TCO2	9	0.6	0.23

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

135

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	138	55 49.5 N	12 0.2 W	13 7 81	2794

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
113	12	12.719	35.284	2322.	2066.	1.7	0.26	403.2	423.7	-20.5	-5.08	2056.2	9.8	0.47
114	100	10.426	35.379D	2327.	2113.	3.9	0.67	518.8	534.9	-16.1	-3.11	2107.4	5.6	0.27
115	251	9.805	35.360	2325.	2128.	6.0	0.78		588.1					
116	591	9.210	35.339	2322.	2133.	6.8	0.85	576.4	614.6	-38.2	-6.63	2121.8	11.2	0.53
117	732	8.830	35.310	2322.	2146.	6.9	0.87		662.4					
340	1007	8.166H	35.254	2319.	2140.	7.9	0.96		649.5					
118	1010	8.074	35.249	2320.	2132.	8.7	0.99	629.6	616.7	12.9	2.05	2135.6	-3.6	-0.17
341	1210	6.536H	35.151	2318.	2166.	11.1	1.15	722.5	764.6	-42.1	-5.83	2156.8	9.2	0.42
119	1236	6.487	35.149	2320.	2166.	11.5	1.17	727.2	756.5	-29.3	-4.03	2159.6	6.4	0.30
342	1598	4.446H	34.985	2306.	2154.	11.5	1.14		755.1					
120	1706	4.237	34.971	2304.	2156.	12.0	1.14		773.5					
343	1892	3.859H	34.955	2306.	2158.	12.8	1.14	758.3	773.9	-15.6	-2.06	2154.8	3.2	0.15
121	2105	3.679	34.956	2309.	2161.	14.7	1.16	677.2	776.5	-99.3	-14.66	2138.8	22.2	1.03
344	2189	3.512H	34.954	2310.	2159.	16.2	1.18	720.6	762.9	-42.3	-5.87	2149.8	9.2	0.43
345	2385	3.293H	34.953	2316.	2164.	19.1	1.20	734.8	761.5	-26.7	-3.63	2158.3	5.7	0.27
122	2649	2.974	34.949	2325.	2175.	27.3	1.29	672.3	777.9	-105.6	-15.71	2151.1	23.9	1.10
346	2678	2.882H	34.944	2330.	2177.	30.5	1.33	742.1	766.5	-24.4	-3.29	2171.8	5.2	0.24
347	2727	2.798H	34.940	2336.	2189.	33.7	1.37	750.5	799.9	-49.4	-6.59	2178.7	10.3	0.47
348	2775	2.716H	34.934	2340.	2191.	36.0	1.40	757.3	792.8	-35.5	-4.69	2183.6	7.4	0.34
124	2803	2.716	34.934		2193.	36.7	1.40							

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	14	-38.0	30.20
DELPCO2/PCO2	14	-5.7	4.44
DELTCO2	14	9.0	6.76
DELTCO2/TCO2	14	0.4	0.31

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	140	55 49.7 N	9 59.6 W	14 7 81	

			MEASURED QUANTITIES						CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
340	200	9.642H	35.324	2322.	2131.	6.0	0.84		607.2					
341	294	9.630H	35.368	2326.	2128.	5.9	0.80		585.2					
342	444	9.443H	35.360	2322.	2130.	6.1	0.81		603.9					
343	595	9.143H	35.336	2323.	2135.	6.4	0.85		618.2					
344	789	8.573H	35.281	2318.	2142.	8.0	0.97		660.8					
345	988	7.605H	35.220	2319.	2163.	10.5	1.12		747.5					
346	1181	6.194H	35.128	2318.	2163.	11.3	1.16		750.4					
347	1471	4.547H	35.000	2308.	2159.	11.8	1.14		770.9					
348	1773	3.880H	34.960	2306.	2155.	13.3	1.15		760.0					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	141	58 34.2 N	11 32.6 W	23 7 81	1742

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	14	12.293	35.314	2332.	2079.	0.7	0.29	403.4	*	434.2	-30.8	-7.63	* 2064.5	14.5	0.70
202	43	12.244	35.314	2328.	2082.	0.7	0.30	406.9	*	448.7	-41.8	-10.28	* 2062.9	19.1	0.92
203	91	10.399	35.373	2328.	2123.	3.2	0.69	515.2*	*	562.8	-47.6	-9.24	* 2106.9	16.1	0.76
540	110	10.251H	35.372	2326.	2122.	4.1	0.74		*	565.1					
204	128	10.230	35.371	2331.	2126.	3.8	0.73	524.0	*	564.4	-40.4	-7.72	* 2112.5	13.5	0.63
205	180	10.000	35.355	2328.	2132.	4.7	0.78	546.0	*	592.3	-46.3	-8.47	* 2117.5	14.5	0.68
206	229	9.689	35.330	2325.	2138.	5.6	0.83	558.2	*	622.6	-64.4	-11.53	* 2118.8	19.2	0.90
207	280	9.595	35.342	2328.	2132.	5.4	0.81	555.2	*	592.3	-37.1	-6.68	* 2120.5	11.5	0.54
208	339	9.561	35.360	2328.	2135.	5.1	0.80	553.5	*	603.0	-49.5	-8.94	* 2119.8	15.2	0.71
541	349	9.396H	35.350	2326.	2134.	5.2	0.81		*	605.7					
209	390	9.408	35.342	2327.	2132.	5.4	0.82	559.5	*	595.3	-35.8	-6.40	* 2121.0	11.0	0.52
210	439	9.268	35.338	2326.	2135.	5.4	0.83	561.3	*	608.7	-47.4	-8.45	* 2120.7	14.3	0.67
211	550	8.822	35.284	2321.	2129.	5.2	0.84	566.1	*	602.4	-36.3	-6.42	* 2118.0	11.0	0.51
212	650	8.774	35.308	2327.	2135.	6.2	0.87	576.2*	*	605.6	-29.4	-5.10	* 2126.2	8.8	0.41
542	655	8.670H	35.294	2328.	2137.	6.0	0.85		*	609.2					
213	774	8.560	35.289	2325.	2136.	6.7	0.89	584.2	*	615.2	-31.0	-5.31	* 2126.9	9.1	0.42
214	897	8.225	35.252	2324.	2143.	6.7	0.91	590.1	*	643.8	-53.7	-9.10	* 2127.9	15.1	0.70
543	898	8.299H	35.267	2323.	2141.	6.4	0.89		*	639.6					
544	1022	7.702H	35.222	2313.	2155.	9.2	1.07		*	734.6					
215	1024	7.616	35.252	2324.	2155.	9.0	1.06	648.5	*	692.8	-44.3	-6.83	* 2143.9	11.1	0.52
216	1138	6.825	35.174	2324.	2165.	10.6	1.15	709.7	*	735.4	-25.7	-3.62	* 2159.2	5.8	0.27
217	1234	6.085	35.124	2320.	2162.	10.4	1.11	704.4*	*	736.7	-32.3	-4.59	* 2154.7	7.3	0.34
545	1332	5.234H	35.062	2327.	2159.	10.3	1.10		*	695.5					
218	1340	5.299	35.066	2317.	2160.	10.8	1.13	715.7	*	738.8	-23.1	-3.23	* 2154.8	5.2	0.24
219	1440	4.701	35.026	2314.	2156.	10.8	1.10	706.8	*	732.0	-25.2	-3.57	* 2150.3	5.7	0.27

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	4	141	58 34.2 N	11 32.6 W	23 7 81	1742

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
546	1500	4.403H	35.003	2311.	2157.	11.0	1.10		748.7					
220	1544	4.224	34.984	2310.	2158.	11.3	1.12	718.9	757.0	-38.1	-5.31	2149.7	8.3	0.39
221	1603	4.102	34.975		2155.	11.6	1.11	715.5						
547	1647	4.023H	34.985	2312.	2157.	12.3	1.11		744.1					
222	1683	3.984	34.984	2314.	2159.	12.4	1.12	709.5*	745.2	-35.7	-5.04	2151.0	8.0	0.37
223	1722	4.029	35.013	2313.	2152.	12.2	1.08		717.9					
224	1755	3.840	35.011	2318.	2161.	13.0	1.08		738.5					
548	1761	3.738H	35.008	2316.	2161.	13.2	1.08		746.2					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	21	-38.9	10.06
DELPCO2/PCO2	21	-6.8	2.25
DELTCO2	21	11.6	4.11
DELTCO2/TCO2	21	0.5	0.20

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	142	61 20.1 N	8 0.6 W	24 7 81	807

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	3	10.494	35.237	2321.	2084.	1.0	0.47	450.7*	*	467.6	-16.9	-3.76	*	2077.0	7.0	0.34
102	10	10.466	35.236	2322.	2089.	1.0	0.47	451.3	*	477.7	-26.4	-5.85	*	2078.2	10.8	0.52
103	26	10.158	35.239	2323.	2098.	1.7	0.56	469.6	*	499.8	-30.2	-6.44	*	2086.3	11.7	0.56
104	61	9.037	35.248	2319.	2120.	4.2	0.78	549.3	*	577.2	-27.9	-5.07	*	2111.2	8.8	0.42
105	90	8.503	35.224	2321.	2128.	5.3	0.85	569.1	*	598.2	-29.1	-5.11	*	2119.2	8.8	0.41
106	120	8.518	35.249	2321.	2131.	5.6	0.86	574.3*	*	608.8	-34.5	-6.01	*	2120.8	10.2	0.48
107	151	8.387	35.244	2321.	2134.	6.0	0.88	581.0	*	619.7	-38.7	-6.66	*	2122.8	11.2	0.53
108	190	8.273	35.237	2319.	2137.	6.2	0.88	579.9	*	637.2	-57.3	-9.88	*	2120.7	16.3	0.76
109	240	8.132	35.239			6.3	0.89	582.0	*							
110	302	7.967	35.229	2319.	2137.	6.4	0.90	591.9	*	637.4	-45.5	-7.69	*	2124.2	12.8	0.60
111	353	7.863	35.221	2320.	2139.	6.7	0.91	597.0*	*	641.1	-44.1	-7.38	*	2126.7	12.3	0.57
112	404	7.800	35.221	2321.	2139.	6.9	0.92	598.5	*	637.9	-39.4	-6.58	*	2128.0	11.0	0.51
447	425	7.471I	35.217	2319.	2140.	6.5	0.90		*	648.1						
113	455	7.078	35.206	2320.	2139.	6.6	0.90	603.6	*	640.7	-37.1	-6.15	*	2128.7	10.3	0.48
114	496	6.251	35.165	2318.	2142.	6.6	0.90	619.0*	*	658.6	-39.6	-6.39	*	2131.4	10.6	0.49
115	545	4.986	35.097	2313.	2143.	6.8	0.90	640.4	*	678.8	-38.4	-5.99	*	2133.2	9.8	0.46
116	594	2.865	34.999	2309.	2149.	7.0	0.92	683.8	*	717.9	-34.1	-4.98	*	2141.0	8.0	0.37
117	636	1.410	34.943	2306.	2156.	7.6	0.95	724.4	*	761.9	-37.5	-5.18	*	2147.9	8.1	0.38
446	646	1.2 I	34.913	2300.	2156.	8.9	0.98		*	788.0						
118	679	.3 I	34.924	2302.	2159.	8.1	0.97	741.5	*	794.3	-52.8	-7.12	*	2148.1	10.9	0.50
119	716	-.319	34.910	2303.	2162.	9.5	1.00	758.8	*	804.7	-45.9	-6.05	*	2152.7	9.3	0.43
120	735	-.412	34.909	2304.	2162.	9.7	1.00	765.8	*	800.7	-34.9	-4.56	*	2155.0	7.0	0.32
445	756	-.528I	34.910	2299.	2165.	9.9	0.99		*	839.7						
121	759	-.540	34.908	2305.	2163.	10.0	1.00	763.4*	*	800.8	-37.4	-4.90	*	2155.5	7.5	0.35
122	787	-.542	34.908	2301.	2162.	10.0	1.00	767.6	*	814.2	-46.6	-6.06	*	2152.8	9.2	0.43

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	142	61 20.1 N	8 0.6 W	24 7 81	807

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM) *	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
448	797	-.513H	34.911	2305.	2159.	9.9	1.00	*	781.1					
123	808	-.532	34.908			10.0	1.00	763.9* *						
124	815	-.529	34.907	2303.	2166.	9.9	1.00	772.8* *	826.4	-53.6	-6.93	2155.5	10.5	0.48

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-38.5	9.34
DELPCO2/PCO2	22	-6.1	1.25
DELTCO2	22	10.1	2.09
DELTCO2/TCO2	22	0.5	0.10

* DELTA PCO2 > 0.5 %

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TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	143	64 49.8 N	6 13.5 W	25 7 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
370	1	8.450H	34.923	2315.	2060.	0.9	0.16	372.2*	418.8	-46.6	-12.51	2036.7	23.3	1.13
371	4	8.45 1	34.921	2315.	2060.	0.9	0.16	393.3*	431.9	-38.6	-9.82	2047.7	18.3	0.89
401	9	8.451	34.917	2316.	2062.	0.8	0.14	389.4*	421.2	-31.8	-8.17	2046.6	15.4	0.75
372	16	8.420H	34.923	2319.	2076.	0.8	0.16	395.0*	447.1	-52.1	-13.19	2051.9	24.1	1.16
373	23	7.277H	34.953	2313.	2065.	1.1	0.23	409.6	434.1	-24.5	-5.99	2053.7	11.3	0.55
374	26	6.960H	34.949	2314.	2080.	1.5	0.27	423.2	467.9	-44.7	-10.57	2060.8	19.2	0.92
375	29	6.684H	34.942	2320.	2087.	1.8	0.31	428.4	472.7	-44.3	-10.33	2068.2	18.8	0.90
402	31	7.177	34.929	2316.	2074.	1.5	0.24	415.5*	448.7	-33.2	-7.99	2059.2	14.8	0.72
376	32	6.527H	34.945	2313.	2083.	2.0	0.36	437.7	478.2	-40.5	-9.24	2066.3	16.7	0.80
377	35	6.448H	34.954	2312.	2089.	2.0	0.34	430.7	496.3	-65.6	-15.23	2062.3	26.7	1.28
378	38	6.291H	34.948	2315.	2089.	2.2	0.37		489.0					
379	43	6.0 I	34.950			2.8	0.42	469.5*						
403	60	4.867	34.987	2312.	2122.	3.6	0.64	540.0	599.1	-59.1	-10.95	2103.7	18.3	0.86
380	65	4.6 I	34.935	2313.	2131.	5.0	0.69	547.3*	628.0	-80.7	-14.74	2107.0	24.0	1.13
404	89	3.101	34.966	2302.	2136.	5.4	0.81	625.9	686.9	-61.0	-9.75	2120.5	15.5	0.73
405	126	2.532	34.951	2304.	2145.	5.4	0.83	612.7*	718.0	-105.3	-17.18	2118.6	26.4	1.23
381	141	1.557H	34.899	2302.	2147.	5.2	0.83	650.8	733.7	-82.9	-12.73	2127.4	19.6	0.91
406	157	2.258	34.945	2301.	2145.	5.4	0.83	640.3	729.9	-89.6	-14.00	2123.4	21.6	1.01
407	197	2.043	34.937	2304.	2147.	5.4	0.83	651.4*	727.1	-75.7	-11.62	2128.9	18.1	0.84
408	242	1.860	34.935	2299.	2142.	5.5	0.84	663.9	724.2	-60.3	-9.08	2127.8	14.2	0.66
409	292	1.459	34.915	2303.	2149.	5.5	0.83	668.0	739.6	-71.6	-10.71	2132.4	16.6	0.77
410	353	1.2 I	34.890	2302.	2152.	5.6	0.84	695.5	757.7	-62.2	-8.95	2138.2	13.8	0.64
411	431	1.0 I	34.893	2301.	2157.	6.1	0.89	720.9	786.5	-65.6	-9.10	2143.1	13.9	0.64
412	514	.7 I	34.896	2296.	2152.	6.5	0.93	730.0	784.7	-54.7	-7.50	2140.5	11.5	0.53
413	612	.3 I	34.902	2299.	2163.	7.2	0.95	750.8	828.1	-77.3	-10.30	2147.7	15.3	0.71

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	143	64 49.8 N	6 13.5 W	25 7 81	

	MEASURED QUANTITIES							*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
414	811	-.345	34.908	2303.	2166.	8.1	0.97	733.2	*	825.3	-92.1	-12.56	*	2147.4	18.6	0.86
415	912	-.457	34.909	2301.	2167.	8.6	0.97	748.9	*	841.0	-92.1	-12.29	*	2148.9	18.1	0.84
416	1011	-.566	34.909	2305.	2167.	9.1	0.98	754.7	*	821.8	-67.1	-8.89	*	2153.6	13.4	0.62
417	1112	-.636	34.909	2302.	2164.	9.6	0.99	750.3	*	820.3	-70.0	-9.33	*	2150.0	14.0	0.65
418	1410	-.788	34.910	2307.	2167.	10.6	0.99	752.5	*	812.2	-59.7	-7.93	*	2155.0	12.0	0.56
419	1809	-.885	34.908D	2299.	2160.	11.5	1.00	744.7	*	813.3	-68.6	-9.21	*	2146.1	13.9	0.64
420	2209	-.922	34.907	2305.	2165.	12.2	1.00	749.7	*	812.0	-62.3	-8.31	*	2157.4	12.6	0.58
421	2608	-.916	34.907	2307.	2166.	13.1	1.01	750.7	*	808.1	-57.4	-7.65	*	2154.4	11.6	0.54
422	3008	-.884	34.907	2306.	2169.	13.2	1.01	754.1	*	828.6	-74.5	-9.88	*	2154.2	14.8	0.68
423	3451	-.845	34.907	2304.	2166.	13.1	1.02	754.5	*	822.3	-67.8	-8.98	*	2152.5	13.5	0.62
424	3849	-.806	34.908	2306.	2166.	13.1	1.02	751.3	*	812.3	-61.0	-8.12	*	2153.7	12.3	0.57

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	34	-63.0	18.20
DELPCO2/PCO2	34	-10.4	2.46
DELTCO2	34	16.8	4.25
DELTCO2/TCO2	34	0.8	0.21

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TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	144	67 41.1 N	3 20.1 W	26 7 81	3778

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
471	2	8.4 I	35.014	2322.	2064.	0.7	0.12	403.3	415.7	-12.4	-3.07	2058.0	6.0	0.29
542	12	8.389H	35.016			0.7	0.13	406.8						
470	15	8.366H	35.016	2324.	2068.	0.7	0.11	401.8*	420.6	-18.8	-4.68	2059.0	9.0	0.44
472	19	8.287H	35.015	2320.	2065.	0.7	0.11	404.4	421.3	-16.9	-4.19	2056.9	8.1	0.39
473	23	7.543H	35.029	2320.	2065.	1.1	0.14	416.5*	421.7	-5.2	-1.25	2062.6	2.4	0.12
474	26	6.572H	35.049	2323.	2083.	1.9	0.23	436.3	457.6	-21.3	-4.88	2073.9	9.1	0.44
475	30	6.046H	35.050	2321.	2090.	2.4	0.34	472.3	479.7	-7.4	-1.57	2087.1	2.9	0.14
476	34	5.677H	35.052	2320.	2100.	3.0	0.47	502.3	509.7	-7.4	-1.46	2097.3	2.7	0.13
477	41	4.971H	35.051	2313.	2126.	4.5	0.74	576.0	611.8	-35.8	-6.21	2115.5	10.5	0.49
478	51	4.540H	35.076	2317.	2138.	5.8	0.87	634.0	644.7	-10.7	-1.69	2135.2	2.8	0.13
544	67	4.353H	35.072			5.7	0.84	631.4						
481	76	4.010H	34.976	2309.	2137.	5.7	0.87	637.3M	666.3	-29.0	-4.55	2129.5	7.5	0.35
545	153	3.057H	34.986			5.5	0.84	655.8						
479	226	2.8 I	35.040	2308.	2141.	5.3	0.85	651.4	687.5	-36.1	-5.54	2132.0	9.0	0.42
546	304	2.567H	34.984			5.4	0.83	655.3S						
480	375	2.4 I	34.996	2304.	2141.	5.4	0.85	666.5M	701.5	-35.0	-5.26	2132.6	8.4	0.39
340	448	2.315H	34.982			5.3	0.83	656.4						
201	493	1.975	34.952	2303.	2147.	5.8	0.84	668.8	731.0	-62.2	-9.31	2132.5	14.5	0.68
202	594	1.221	34.914	2303.	2156.	6.2	0.87	700.0	772.8	-72.8	-10.40	2140.1	15.9	0.74
203	692	.8 I	34.894	2300.	2156.	6.6	0.92	741.4	786.8	-45.4	-6.13	2146.6	9.4	0.44
204	788	.4 I	34.904	2299.	2162.	7.1	0.96	753.6	822.8	-69.2	-9.19	2148.2	13.8	0.64
205	886	.0 I	34.907	2302.	2162.	7.5	0.96	762.7	809.2	-46.5	-6.10	2152.7	9.3	0.43
206	989	-.293	34.911	2304.	2163.	8.2	0.97	765.5*	805.3	-39.8	-5.20	2155.0	8.0	0.37
207	1090	-.434	34.911	2302.	2163.	8.8	0.98	773.0	814.8	-41.8	-5.41	2154.8	8.2	0.38
208	1242	-.591	34.911	2305.	2165.	9.5	0.98	766.2	811.3	-45.1	-5.89	2156.0	9.0	0.42

* DELTA PCO2 > 0.5 %

M QUESTIONABLE DUE TO MACHINE MALFUNCTION

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	144	67 41.1 N	3 20.1 W	26 7 81	3778

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
209	1392	-.691	34.909	2304.	2163.	10.0	0.99	769.4	805.8	-36.4	-4.73	2155.7	7.3	0.34
222	2398	-.909	34.907	2305.	2159.	12.1	1.02	759.3	781.6	-22.3	-2.94	2154.4	4.6	0.21
547	2485	-.938H	34.909			12.5	1.02	759.4						
142	2757	-.913H	34.908	2309.	2165.	13.0	1.03		793.5					
221	2791	-.901	34.906	2306.	2164.	13.1	1.03	763.5	802.1	-38.6	-5.06	2156.2	7.8	0.36
220	3190	-.868	34.907	2307.	2166.	13.1	1.02		808.2					
146	3235	-.872H	34.908	2311.	2166.	13.0	1.03		789.6					
147	3483	-.843H	34.908	2309.	2167.	13.1	1.03		803.8					
219	3502	-.839	34.907	2307.	2164.	13.1	1.02	763.0	797.9	-34.9	-4.58	2156.9	7.1	0.33
218	3573	-.833	34.907	2311.	2166.	13.2	1.02	765.0	790.0	-25.0	-3.27	2160.9	5.1	0.24
217	3633	-.827	34.906	2308.	2167.	13.2	1.02	762.9	808.3	-45.4	-5.95	2157.9	9.1	0.42
216	3665	-.824	34.906	2305.	2163.	13.3	1.02	761.0	801.5	-40.5	-5.32	2154.8	8.2	0.38
215	3686	-.822	34.907			13.3	1.02	763.4						
213	3709	-.819	34.907		2163.	13.3	1.02	760.8						
211	3709	-.818	34.908	2308.	2162.	13.4	1.02	764.4	782.9	-18.5	-2.43	2158.2	3.8	0.18
148	3736	-.823H	34.907	2308.	2167.	13.1	1.03		808.9					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	28	-32.9	17.57
DELPCO2/PCO2	28	-4.9	2.23
DELTCO2	28	7.8	3.32
DELTCO2/TCO2	28	0.4	0.15

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	145	69 59.7 N	2 29.0 E	27 7 81	3222

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
370	2	8.072H	35.091	2328.	2070.	2.4	0.23	410.1*	419.2	-9.1	-2.22	2065.7	4.3	0.21
501	14	8.120	35.084			2.4	0.21	399.2						
371	15	8.075H	35.093	2325.	2065.	2.4	0.23	420.0*	413.9	6.1	1.45	2067.9	-2.9	-0.14
372	18	8.063H	35.092	2322.	2069.	2.4	0.23	431.5	428.0	3.5	0.82	2070.6	-1.6	-0.08
373	21	7.305H	35.093	2323.	2068.	3.0	0.24	417.2*	424.0	-6.8	-1.64	2064.8	3.2	0.15
374	24	6.793H	35.110	2328.	2085.	3.2	0.33	461.2	453.6	7.6	1.65	2088.2	-3.2	-0.15
375	27	6.640H	35.112			3.3	0.34	448.1*						
204	34	6.275	35.087					445.5						
376	36	6.435H	35.107	2332.	2085.	3.5	0.32		445.7					
502	39	6.329	35.137			4.2	0.52	577.8*						
377	51	6.042H	35.164	2323.	2128.	5.2	0.74	577.8*	590.7	-12.9	-2.23	2124.1	3.9	0.18
503	60	5.785	35.163	2319.	2137.	5.7	0.83	605.3D	635.2	-29.9	-4.93	2128.7	8.3	0.39
504	91	5.103	35.123	2314.	2136.	5.6	0.87	621.4	647.8	-26.4	-4.25	2128.9	7.1	0.33
442	99	4.645H	35.096	2318.	2143.	5.4	0.85		660.6					
505	120	4.594	35.092	2315.	2141.	5.4	0.86	642.9	663.3	-20.4	-3.17	2135.7	5.3	0.25
506	153	4.132	35.068	2314.	2142.	5.3	0.85	646.9	670.1	-23.2	-3.58	2136.1	5.9	0.28
507	188	3.963	35.064	2310.	2139.	5.3	0.84	637.4M	672.1	-34.7	-5.44	2130.1	8.9	0.42
444	200	3.872H	35.062	2314.	2143.	5.2	0.83		674.0					
509	249	3.771	35.059	2312.	2140.	5.3	0.83	631.6M	669.0	-37.4	-5.93	2130.3	9.7	0.45
511	317	3.660	35.052	2315.		5.2	0.82	631.9E						
513	408	3.555	35.046	2315.	2137.	5.2	0.82	614.4D	646.6	-32.2	-5.24	2128.3	8.7	0.41
446	449	3.466H	35.044	2313.	2136.	5.1	0.82		649.5					
515	529	3.363	35.036	2313.	2138.	5.2	0.82		656.9					
447	650	3.219H	35.035	2308.	2136.	5.1	0.82		666.8					
517	715	3.163	35.031	2317.	2139.	5.2	0.82		647.3					

* DELTA PCO2 > 0.5 %

M QUESTIONABLE DUE TO MACHINE MALFUNCTION

D ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	145	69 59.7 N	2 29.0 E	27 7 81	3222

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
518	777	3.012	35.021	2308.	2136.	5.2	0.83	635.0D	666.2	-31.2	-4.92	2127.9	8.1	0.38
448	796	2.792H	35.002	2311.	2140.	5.3	0.84		671.6					
519	828	2.580	34.985	2307.	2143.	5.5	0.85	636.4F	698.5	-62.1	-9.75	2127.5	15.5	0.72
520	912	1.364	34.913	2300.	2147.	6.0	0.90	664.4D	743.3	-78.9	-11.88	2128.7	18.3	0.85
521	961	1.1 I	34.896	2300.	2151.	6.2	0.91		762.1					
140	979	1.0 I	34.894	2299.	2155.	6.2	0.92	735.2	786.2	-51.0	-6.94	2144.4	10.6	0.49
523	1179	-.113	34.904	2298.	2157.	7.3	0.96	645.6F	801.4	-155.8	-24.13	2122.1	34.9	1.62
236	1395	-.458	34.910	2303.	2160.	8.8	0.98	774.7	794.2	-19.5	-2.52	2156.1	3.9	0.18
142	1437	-.512H	34.910	2303.	2166.	9.0	0.98		825.5					
235	1697	-.723	34.911	2304.	2163.	8.7	0.98	767.5	805.5	-38.0	-4.95	2155.4	7.6	0.35
234	1996	-.833	34.911	2303.	2164.	10.2	0.99	767.1	815.6	-48.5	-6.33	2154.4	9.6	0.44
144	2040	-.858H	34.909	2304.	2162.	11.2	1.01		801.0					
233	2298	-.890	34.911	2303.	2162.	11.0	1.00	760.3	805.5	-45.2	-5.94	2152.9	9.1	0.42
232	2596	-.906	34.909	2308.	2167.	11.8	1.01	762.7	808.4	-45.7	-6.00	2157.8	9.2	0.42
222	3230	-.868	34.909	2308.	2161.	12.9	1.01	757.7	778.3	-20.6	-2.72	2156.7	4.3	0.20

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-33.8	32.76
DELPCO2/PCO2	24	-5.0	5.03
DELTCO2	24	7.9	7.45
DELTCO2/TCO2	24	0.4	0.35

D ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

F DELTA PCO2 > 0.5 % AND ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	146	72 24.7 N	2 4.2 E	29 7 81	3106

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
270	2	6.731H	34.964	2313.	2059.	1.9	0.20		421.0					
101	10	6.825	34.999	2313.	2060.	1.9	0.23	417.9	423.7	-5.8	-1.38	2057.3	2.7	0.13
271	18	6.833H	35.044	2319.	2068.	2.2	0.25		430.9					
272	21	6.512H	35.034	2320.	2059.	2.3	0.24		409.4					
274	28	4.952H	34.991	2319.	2063.	2.9	0.26		419.3					
276	34	4.445H	34.990	2317.	2061.	3.2	0.32		419.1					
278	52	3.590H	34.987	2318.	2093.	3.7	0.47		494.2					
103	64	3.514	34.990	2313.	2090.	3.7	0.52	499.0D	498.2	0.8	0.17	2090.3	-0.3	-0.01
279	76	3.295H	35.012	2309.	2122.	5.0	0.74		609.6					
104	100	3.017	35.001	2317.	2131.	4.5	0.72	597.7	616.4	-18.7	-3.13	2125.7	5.3	0.25
105	142	2.831	35.005	2301.	2128.	4.8	0.79	641.0	658.7	-17.7	-2.76	2123.4	4.6	0.21
106	183	2.476	34.985	2307.	2137.	5.0	0.83	652.8	673.3	-20.5	-3.14	2131.8	5.2	0.24
107	223	1.889	34.949			5.3	0.84	680.6						
108	273	1.164	34.912	2302.	2145.	5.5	0.87	702.0	725.3	-23.3	-3.32	2139.7	5.3	0.25
109	338	.5 I	34.848	2295.	2142.	5.3	0.83	723.8	738.4	-14.6	-2.02	2138.8	3.2	0.15
110	397	-.125	34.848	2303.	2150.	5.6	0.87	721.4	743.0	-21.6	-2.99	2145.3	4.7	0.22
111	456	-.230	34.862	2291.	2145.	6.2	0.89	743.5	771.1	-27.6	-3.71	2139.2	5.8	0.27
112	480	-.239	34.868	2299.	2155.	6.4	0.90	745.8*	785.4	-39.6	-5.31	2146.8	8.2	0.38
113	536	-.3 I	34.895	2296.	2152.	7.1	0.95	766.3S	784.5	-18.2	-2.38	2148.3	3.7	0.17
114	602	-.462	34.880	2298.	2152.	6.8	0.91	748.0	774.9	-26.9	-3.60	2146.4	5.6	0.26
115	683	-.498	34.891	2294.	2151.	7.4	0.94	754.7	788.4	-33.7	-4.47	2144.1	6.9	0.32
116	760	-.517	34.907	2300.	2155.	8.0	0.96	768.7	782.7	-14.0	-1.83	2152.1	2.9	0.13
117	834	-.528	34.904	2296.	2155.	8.5	0.98	765.7	800.6	-34.9	-4.56	2148.0	7.0	0.32
118	959	-.670	34.904	2305.	2162.	8.8	0.97	768.0	795.3	-27.3	-3.55	2156.5	5.5	0.25
119	1109	-.764	34.907	2296.	2153.	9.4	0.97	756.9	790.9	-32.0	-4.22	2146.5	6.5	0.30

* DELTA PCO2 > 0.5 %

S SINGLE ANALYSIS

D ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	146	72 24.7 N	2 4.2 E	29 7 81	3106

			MEASURED QUANTITIES						CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
121	1513	-.895	34.911	2304.	2160.	10.8	0.99	770.1	790.6	-20.5	-2.66	2155.9	4.1	0.19
136	1792	-.948	34.906	2301.	2162.	11.1	0.99	764.8	814.2	-49.4	-6.46	2152.2	9.8	0.45
135	2090	-.973	34.905	2301.	2154.	11.0	0.99	751.5	774.1	-22.6	-3.01	2149.3	4.7	0.22
134	2390	-.980	34.906	2305.	2158.	10.8	0.98	763.3	775.7	-12.4	-1.62	2155.5	2.5	0.12
133	2691	-.970	34.904	2300.	2153.	10.9	0.98		773.0					
132	2844	-.959	34.901	2303.	2157.	10.9	0.98	765.0	779.1	-14.1	-1.84	2154.1	2.9	0.13
122	3149	-.933	34.909	2298.	2154.	10.9	0.99	757.8	787.3	-29.5	-3.90	2148.0	6.0	0.28

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-22.8	10.84
DELPCO2/PCO2	23	-3.1	1.38
DELTCO2	23	4.9	2.09
DELTCO2/TCO2	23	0.2	0.10

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	SIN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	147	73 5.5 N	0 46.2 E	29 7 81	3075

		MEASURED QUANTITIES							*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
151	1	4.296	33.496	2228.	2013.	0.4	0.16		*	465.0					
101	15	3.286	34.172	2265.	2033.	0.2	0.16	436.5*	*	444.8	-8.3	-1.89	2029.5	3.5	0.17

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	1	-8.3	68.23
DELPCO2/PCO2	1	-1.9	3.58
DELTCO2	1	3.5	12.08
DELTCO2/TCO2	1	0.2	0.03

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	148	74 56.0 N	1 8.0 W	30 7 81	3692

		MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
370	2	3.810H	34.373	2286.	2050.	0.3	0.13		*	444.9					
201	4	3.831	34.381	2281.	2043.	0.4	0.13	427.5*	*	438.4	-10.9	-2.54	2038.3	4.7	0.23
540	9	3.492H	34.410	2286.	2047.	0.3	0.12	437.3*	*	438.3	-1.0	-0.22	2046.6	0.4	0.02
371	10	3.600H	34.399	2281.	2041.	0.3	0.12		*	433.9					
202	13	3.774	34.385	2285.	2048.	0.4	0.13	448.5F	*	442.5	6.0	1.35	2050.5	-2.5	-0.12
372	18	3.349H	34.458	2286.	2052.	0.3	0.14		*	450.6					
373	21	2.407H	34.613	2297.	2120.	0.4	0.15		*	629.9					
374	23	1.626H	34.651	2303.	2057.	0.5	0.21		*	431.6					
375	26	1.4 1	34.728	2301.	2050.	0.6	0.28		*	421.1					
376	29	1.2 1	34.745	2306.	2078.	0.6	0.36		*	478.0					
203	30	1.139	34.701	2300.	2062.	0.5	0.28	435.0	*	449.6	-14.6	-3.37	2055.7	6.3	0.30
377	35	.7 1	34.766	2307.	2113.	0.8	0.58		*	579.6					
378	50	-.478H	34.818	2308.	2132.	1.5	0.66		*	645.4					
204	59	-.424	34.820	2306.	2129.	1.9	0.63	608.8	*	640.4	-31.6	-5.20	2120.4	8.6	0.40
541	77	-.700H	34.864	2300.	2149.	5.6	0.83	735.1	*	751.2	-16.1	-2.19	2145.5	3.5	0.16
205	88	-1.024	34.849	2300.	2153.	5.5	0.85	738.0	*	770.2	-32.2	-4.37	2146.2	6.8	0.32
206	123	-1.188	34.855	2301.	2156.	6.2	0.89	748.9	*	781.0	-32.1	-4.29	2149.4	6.6	0.31
207	154	-1.134	34.863	2298.	2149.	6.6	0.88	747.5	*	759.7	-12.2	-1.64	2146.4	2.6	0.12
208	183	-1.163	34.866	2297.	2155.	6.7	0.88	753.9	*	794.3	-40.4	-5.36	2146.8	8.2	0.38
209	224	-1.149	34.870			7.1	0.90	753.4S	*						
542	248	-1.197H	34.871	2301.	2156.	7.0	0.88	756.3*	*	781.3	-25.0	-3.31	2150.9	5.1	0.24
210	264	-1.182	34.872	2299.	2152.	7.4	0.90	762.7	*	770.6	-7.9	-1.04	2150.4	1.6	0.08
211	303	-1.203	34.874	2298.	2155.	7.6	0.91	760.7	*	790.1	-29.4	-3.86	2149.0	6.0	0.28
212	353	-1.157	34.881	2298.	2157.	7.6	0.91	765.6	*	800.7	-35.1	-4.58	2150.0	7.0	0.33
543	445	-1.169H	34.887	2298.	2159.	8.2	0.93	765.3	*	811.3					

* DELTA PCO2 > 0.5 %

F DELTA PCO2 > 0.5 % AND ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

I INTERPOLATED VALUE

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TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	148	74 56.0 N	1 8.0 W	30 7 81	3692

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
214	502	-1.144	34.887	2298.	2156.	8.5	0.94	764.3	795.9	-31.6	-4.14	2149.6	6.4	0.30
216	702	-1.163	34.888	2297.	2155.	8.9	0.94	768.9	795.9	-27.0	-3.51	2149.6	5.4	0.25
440	742	-1.207H	34.886	2301.	2158.	8.7	0.94	767.7	792.5	-24.8	-3.23	2153.0	5.0	0.23
441	839	-1.189H	34.888	2297.	2163.	8.9	0.94		838.2					
218	901	-1.171	34.888	2297.	2159.	9.2	0.95	762.4	816.8	-54.4	-7.14	2148.2	10.8	0.50
442	939	-1.206H	34.888	2298.	2156.	9.1	0.94	761.9	796.5	-34.6	-4.54	2149.0	7.0	0.32
443	1138	-1.171H	34.890	2303.		9.3	0.94							
220	1189	-1.167	34.891	2298.	2157.	9.5	0.95	765.7	801.2	-35.5	-4.64	2149.9	7.1	0.33
221	1483	-1.161	34.894			9.6	0.96	758.0						
236	1808	-1.164	34.892	2299.	2152.	9.4	0.95	757.8	772.2	-14.4	-1.89	2149.0	3.0	0.14
446	1883	-1.170H	34.892			9.5	0.95	766.7						
235	2097	-1.163	34.889			9.5	0.95	746.9D						
234	2397	-1.155	34.888			9.6	0.95	761.3						
233	2692	-1.141	34.890			9.6	0.95	769.0						
145	2776	-1.127H	34.892	2297.	2151.	9.7	0.95		776.0					
232	2984	-1.122	34.890	2298.	2156.	9.8	0.95	758.6	796.7	-38.1	-5.02	2148.3	7.7	0.36
231	3278	-1.100	34.890	2297.	2156.	9.9	0.95	764.3	801.3	-37.0	-4.84	2148.6	7.4	0.34
230	3518	-1.080	34.887			10.1	0.95	758.1						
222	3698	-1.064	34.889	2299.	2162.	10.2	0.96	766.2	823.0	-56.8	-7.41	2150.8	11.2	0.52

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-26.5	14.98
DELPCO2/PCO2	24	-3.6	1.97
DELTCO2	24	5.7	3.04
DELTCO2/TCO2	24	0.3	0.14

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	149	76 52.5 N	1 2.2 E	31 7 81	3197

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	5	1.426	32.712	2176.	1950.	0.5	0.12	394.8*	409.3	-14.5	-3.68	1943.5	6.5	0.33
202	11	1.305	33.415			0.8	0.13	409.3*						
203	33	1.2 I	34.493	2288.	2073.	2.2	0.40	494.6	502.9	-8.3	-1.67	2070.0	3.0	0.14
441	49	1.670H	34.859	2301.	2134.	4.7	0.78		680.1					
204	69	1.601	34.900	2302.	2132.	4.8	0.79	655.7	669.3	-13.6	-2.07	2128.6	3.4	0.16
442	99	1.398H	34.927	2309.	2140.	5.3	0.83		677.3					
205	101	1.415	34.925	2302.	2141.	5.1	0.82	670.2*	707.4	-37.2	-5.55	2132.1	8.9	0.41
206	133	1.333	34.936	2299.	2137.	5.2	0.82	673.0	701.9	-28.9	-4.30	2130.1	6.9	0.32
443	149	1.133H	34.931	2312.	2142.	5.3	0.84		674.7					
207	163	1.227	34.937	2301.	2142.	5.1	0.82	678.5	716.5	-38.0	-5.60	2133.1	8.9	0.42
444	198	1.0 I	34.918	2301.	2138.	5.6	0.85		698.7					
208	203	1.0 I	34.927	2299.	2138.	5.4	0.83	680.4	706.0	-25.6	-3.76	2132.0	6.0	0.28
209	244	.7 I	34.913	2307.	2470.	5.7	0.84	695.1	5932.7	-5237.6	-753.50	2142.5	327.5	13.26
445	248	.7 I	34.888	2303.	2146.	5.5	0.85		725.9					
210	293	.4 I	34.896	2298.	2140.	5.7	0.84	699.0	718.7	-19.7	-2.82	2135.5	4.5	0.21
446	298	.4 I	34.893	2297.	2146.	6.0	0.88		750.2					
211	354	.1 I	34.884	2301.	2150.	5.7	0.85	715.3	751.7	-36.4	-5.08	2142.0	8.0	0.37
212	413	-.293	34.880	2304.	2151.	6.0	0.86	722.4	744.0	-21.6	-2.99	2146.3	4.7	0.22
447	446	-.545H	34.876	2298.	2150.	5.9	0.87		764.7					
448	596	-.732H	34.874	2304.	2148.	6.2	0.89		730.6					
214	614	-.687	34.880	2298.	2149.	6.2	0.87	738.3	759.9	-21.6	-2.92	2144.4	4.6	0.21
140	747	-.794H	34.882	2301.	2155.	6.7	0.91		776.5					
216	811	-.842	34.880	2298.	2153.	6.4	0.88	738.2	779.6	-41.4	-5.60	2144.4	8.6	0.40
141	946	-.788H	34.891	2300.	2156.	7.8	0.95		786.8					
218	1108	-.909	34.884	2300.	2158.	7.5	0.94	760.5	796.4	-35.9	-4.72	2150.7	7.3	0.34

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

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TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	149	76 52.5 N	1 2.2 E	31 7 81	3197

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
142	1145	-.856H	34.898	2299.		8.5	0.97		801.6	-38.8	-5.09	2150.2	7.8	0.36
219	1248	-.903	34.895	2299.	2158.	8.2	0.96	762.8	799.5	-36.9	-4.84	2153.6	7.4	0.34
235	1539	-.910	34.904	2303.	2161.	9.6	0.98	762.6	805.9					
144	1640	-.943H	34.902	2305.	2164.	9.8	0.99		784.4	-24.9	-3.28	2151.9	5.1	0.24
234	1790	-.958	34.905	2302.	2157.	10.0	0.99	759.5	795.0	-48.4	-6.49	2150.1	9.9	0.46
233	2088	-.992	34.907	2303.	2160.	10.3	0.99	746.6D	829.6					
146	2381	-1.012H	34.903	2300.	2164.	10.3	1.00		788.5	-32.9	-4.35	2150.3	6.7	0.31
232	2437	-1.017	34.904	2301.	2157.	10.5	0.99	755.6	793.5	-30.3	-3.97	2152.9	6.1	0.28
231	2785	-1.049	34.901	2302.	2159.	10.5	0.98	763.2	775.8	-14.3	-1.87	2156.1	2.9	0.14
230	3083	-1.066	34.899	2306.	2159.	10.6	0.98	761.5	819.7					
148	3135	-1.057H	34.894	2301.	2163.	10.5	1.00		803.8	-38.5	-5.03	2152.3	7.7	0.36
220	3209	-1.060	34.896	2301.	2160.	10.6	0.98	765.3						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-265.7	1085.01
DELPCO2/PCO2	22	-38.1	156.11
DELTCO2	22	21.0	66.92
DELTCO2/TCO2	22	0.9	2.70

D ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	151	78 6.3 N	2 46.1 E	1 8 81	2981

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	4	3.112	33.170	2202.	1966.	0.7	0.07	386.9	*	401.0	-14.1	-3.65	* 1959.4	6.6	0.33
102	7	3.283	33.282	2212.	1975.	0.7	0.06	399.0D	*	403.4	-4.4	-1.10	* 1973.0	2.0	0.10
103	11	3.570	33.475	2225.	1983.	0.7	0.05	387.5	*	399.1	-11.6	-3.00	* 1977.5	5.5	0.28
104	19	4.570	34.778	2307.	2041.	1.0	0.07	377.8*	*	391.4	-13.6	-3.60	* 2034.0	7.0	0.34
105	27	3.525	34.923	2314.	2063.	0.4	0.22	413.2	*	427.3	-14.1	-3.41	* 2056.5	6.5	0.32
106	35	2.592	34.905			1.5	0.56	528.3	*						
107	60	2.299	34.975	2312.	2141.	4.4	0.78	632.2*	*	671.3	-39.1	-6.19	* 2130.9	10.1	0.47
108	107	1.902	34.969	2306.	2142.	4.9	0.82	654.8	*	697.8	-43.0	-6.57	* 2131.5	10.5	0.49
109	184	1.465	34.958	2309.	2144.	5.2	0.84	670.5	*	695.0	-24.5	-3.65	* 2138.1	5.9	0.28
110	251	1.0 I	34.925	2300.	2145.	5.4	0.85	681.4*	*	733.5	-52.1	-7.64	* 2133.0	12.0	0.56
111	320	.6 I	34.873	2300.	2148.	5.5	0.86	719.4	*	747.1	-27.7	-3.85	* 2141.9	6.1	0.28
112	467	-.396	34.884	2300.	2165.	6.6	0.92	740.2	*	832.9	-92.7	-12.52	* 2146.5	18.5	0.85
113	616	-.704	34.884	2302.	2158.	7.2	0.94	754.7	*	787.3	-32.6	-4.32	* 2151.3	6.7	0.31
115	914	-.829	34.899	2303.	2161.	8.8	0.99	763.3	*	799.0	-35.7	-4.68	* 2153.8	7.2	0.33
117	1210	-.917	34.899	2306.	2160.	9.5	1.00	767.4	*	780.7	-13.3	-1.74	* 2157.3	2.7	0.13
136	1599	-.970	34.907	2308.	2161.	10.5	1.03	762.1	*	778.2	-16.1	-2.11	* 2157.7	3.3	0.15
134	2048	-1.027	34.907	2306.	2155.	10.5	1.02	738.5D	*	757.7	-19.2	-2.59	* 2150.9	4.1	0.19
118	2160	-1.007	34.903			10.9	1.02	752.7	*						
133	2297	-1.047	34.903	2301.	2156.	10.6	1.02	755.8	*	783.8	-28.0	-3.70	* 2150.3	5.7	0.27
132	2597	-1.065	34.900	2305.	2160.	10.5	1.01	744.1	*	785.9	-41.8	-5.61	* 2151.3	8.7	0.40
122	2989	-1.075	34.893			10.7	1.00	756.0	*						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	18	-29.1	20.04
DELPCO2/PCO2	18	-4.4	2.56
DELTCO2	18	7.2	3.75
DELTCO2/TCO2	18	0.3	0.17

* DELTA PCO2 > 0.5 %

D ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	152	78 41.8 N	5 41.6 E	2 8 81	2436

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	4	3.855	33.523	2227.	1986.	0.7	0.06	395.1*	*	402.5	-7.4	-1.88	* 1982.5	3.5	0.17
114	656	-.529	34.891	2300.	2157.	7.5	0.96	755.2*	*	791.9	-36.7	-4.86	* 2149.5	7.5	0.35
117	1097	-.830	34.906	2305.	2138.	9.4	0.99	750.0	*	685.1	64.9	8.65	* 2152.7	-14.7	-0.69
123	2333	-.953	34.911	2305.	2158.	10.8	1.01	751.8	*	776.4	-24.6	-3.27	* 2152.9	5.1	0.24
124	2456	-1.039	34.901	2304.	2158.	10.9	1.01	753.4	*	779.9	-26.5	-3.52	* 2152.5	5.5	0.25

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	5	-6.1	36.71
DELPCO2/PCO2	5	-1.0	4.91
DELTCO2	5	1.4	8.13
DELTCO2/TCO2	5	0.1	0.38

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	153	78 46.3 N	5 9.5 E	2 8 81	2607

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	6	3.082	32.957	2185.	1954.	0.7	0.06	400.6	403.7	-3.1	-0.77	1952.6	1.4	0.07
102	48	3.165	34.997	2312.	2133.	3.8	0.75	616.7	640.0	-23.3	-3.78	2126.7	6.3	0.30
109	614	-.275	34.877	2298.	2151.	6.3	0.90	737.5	770.4	-32.9	-4.46	2144.1	6.9	0.32
113	1412	-.804	34.916	2302.	2159.	10.2	0.99	750.7	793.9	-43.2	-5.75	2150.2	8.8	0.41
120	2440	-.963	34.909	2304.	2159.	10.7	1.00	754.3	785.7	-31.4	-4.16	2152.6	6.4	0.30
123	2649	-.986	34.905	2303.	2159.	10.7	1.00	750.4	790.2	-39.8	-5.30	2150.8	8.2	0.38
124	2679	-.985	34.905	2302.	2160.	10.7	1.01	757.0	799.9	-42.9	-5.67	2151.3	8.7	0.40

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	7	-30.9	13.15
DELPCO2/PCO2	7	-4.3	1.59
DELTCO2	7	6.7	2.37
DELTCO2/TCO2	7	0.3	0.11

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TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	154	78 34.3 N	9 28.3 E	2 8 81	370

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
109	2	3.766	33.881	2249.	2002.	0.4	0.05	385.6	401.0	-15.4	-3.99	1994.6	7.4	0.37
340	23	5.191H	34.818	2307.	2053.	0.5	0.12	406.6	416.6	-10.0	-2.46	2048.3	4.7	0.23
341	64	5.094H	35.079	2316.	2133.	5.1	0.80	608.4	628.6	-20.2	-3.33	2127.4	5.6	0.26
342	101	4.444H	35.064	2313.	2136.	5.3	0.83	620.9	649.8	-28.9	-4.66	2128.3	7.7	0.36
343	155	3.889H	35.044	2311.	2140.	5.5	0.84	639.9	672.4	-32.5	-5.08	2131.7	8.3	0.39
344	319	2.557H	34.986	2310.	2143.	5.5	0.84	654.8	687.7	-32.9	-5.02	2134.8	8.2	0.38
345	370	2.265H	34.965	2304.	2146.	5.9	0.87	681.7	723.1	-41.4	-6.08	2136.4	9.6	0.45

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	7	-25.9	10.27
DELPCO2/PCO2	7	-4.4	1.12
DELTCO2	7	7.4	1.55
DELTCO2/TCO2	7	0.3	0.07

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	155	78 30.0 N	8 50.0 E	2 8 81	948

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
106	2	6.095	34.924	2327.	2070.	0.6	0.20	417.8	*	419.0	-1.2	-0.30	2069.4	0.6	0.03
107	11	6.107	34.921	2313.	2065.	0.5	0.17	416.2		433.5	-17.3	-4.15	2057.1	7.9	0.38
108	21	5.789	34.923	2315.	2067.	0.5	0.20	407.9		434.3	-26.4	-6.47	2054.8	12.2	0.59
109	40	5.209	34.907	2320.	2092.	1.8	0.43	475.4	*	486.0	-10.6	-2.23	2087.9	4.1	0.20
110	78	4.589	35.052	2317.	2134.	4.7	0.78	598.8		628.8	-30.0	-5.01	2125.6	8.4	0.39
111	133	3.943	35.038	2310.	2137.	5.0	0.80	632.5		663.2	-30.7	-4.85	2129.0	8.0	0.37
112	203	3.385	35.024	2311.	2138.	5.0	0.81	636.1		663.9	-27.8	-4.37	2130.8	7.2	0.34
113	289	2.604	34.999	2309.	2141.	5.2	0.81	658.8		682.6	-23.8	-3.62	2135.1	5.9	0.28
116	525	1.644	34.962	2306.	2141.	5.3	0.83	661.9		693.3	-31.4	-4.75	2133.3	7.7	0.36
118	705	.7 I	34.893	2300.	2149.	5.8	0.86	715.0		751.6	-36.6	-5.12	2141.0	8.0	0.37
120	761	.4 I	34.913	2303.	2152.	6.3	0.88	721.2		754.2	-33.0	-4.57	2144.8	7.2	0.33
124	986	-.385	34.930	2307.	2163.	9.0	0.95	758.6	*	791.8	-33.2	-4.38	2156.2	6.8	0.31

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-25.2	10.03
DELPCO2/PCO2	12	-4.2	1.50
DELTCO2	12	7.0	2.63
DELTCO2/TCO2	12	0.3	0.13

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

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TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	156	78 26.7 N	8 19.1 E	3 8 81	1745

		MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	9	5.523	34.594	2295.	2041.	0.6	0.04	399.0	*	409.8	-10.8	-2.70	2035.8	5.2	0.25
240	11	5.483H	34.628	2300.	2039.	0.4	0.05		*	397.6					
104	49	3.781	34.910	2316.	2068.	0.4	0.12	419.4	*	434.1	-14.7	-3.51	2061.3	6.7	0.32
241	99	3.053H	34.975	2310.	2132.	2.8	0.74		*	642.4					
242	199	2.311H	34.980	2311.	2141.	5.1	0.83		*	675.3					
245	695	.5 I	34.893	2300.	2148.	6.0	0.87		*	747.0					
248	1719	-.922H	34.912	2304.	2163.	11.9	1.02		*	805.8					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	2	-12.7	1.97
DELPCO2/PCO2	2	-3.1	0.40
DELTCO2	2	5.9	0.75
DELTCO2/TCO2	2	0.3	0.03

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	157	78 18.0 N	6 57.5 E	3 8 81	3185

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
270	2	5.477H	34.584	2293.	2037.	0.5	0.07	402.4	*	405.0	-2.6	-0.65	*	2035.7	1.3	0.06
101	3	5.454	34.571	2292.	2037.	0.6	0.06	389.2*	*	406.5	-17.3	-4.45	*	2028.5	8.5	0.42
102	14	5.422	34.569	2296.	2040.	0.6	0.06	390.4	*	405.8	-15.4	-3.95	*	2032.4	7.6	0.37
103	25	5.188	34.648	2300.	2039.	0.6	0.06	383.6*	*	397.6	-14.0	-3.64	*	2032.0	7.0	0.35
278	40	3.667H	34.941	2313.	2094.	0.5	0.38	486.7	*	507.4	-20.7	-4.26	*	2086.3	7.7	0.37
104	50	3.432	34.979			1.6	0.71	597.2	*							
105	98	2.642	34.988	2307.	2138.	4.9	0.80	635.3	*	677.5	-42.2	-6.64	*	2127.2	10.8	0.50
106	154	2.293	34.988	2308.	2140.	5.2	0.84	662.5	*	682.5	-20.0	-3.01	*	2135.1	4.9	0.23
107	204	2.136	34.984	2308.	2142.	5.2	0.84	654.3	*	690.4	-36.1	-5.52	*	2133.1	8.9	0.42
108	255	2.004	34.981	2310.	2140.	5.2	0.83	654.6	*	674.8	-20.2	-3.09	*	2134.9	5.1	0.24
109	305	1.845	34.975	2307.	2140.	5.2	0.83	648.9	*	685.7	-36.8	-5.68	*	2130.8	9.2	0.43
111	556	.6 I	34.920	2304.	2147.	5.7	0.87	697.2	*	727.2	-30.0	-4.30	*	2140.2	6.8	0.32
112	708	-.223	34.872	2299.	2151.	6.0	0.89	725.9	*	765.5	-39.6	-5.46	*	2142.5	8.5	0.39
113	806	-.3 I	34.914	2303.	2157.	7.2	0.94	746.7	*	778.5	-31.8	-4.26	*	2150.4	6.6	0.31
114	953	-.453	34.915	2304.	2162.	8.5	0.97	760.0	*	800.1	-40.1	-5.28	*	2153.9	8.1	0.38
115	1103	-.681	34.916	2304.	2160.	10.0	1.00	763.9*	*	790.0	-26.1	-3.42	*	2154.7	5.3	0.25
117	1651	-.934	34.906	2305.	2165.	11.3	1.02	765.0	*	811.6	-46.6	-6.09	*	2155.7	9.3	0.43
119	2247	-.965	34.907	2305.	2164.	11.5	1.02	762.9*	*	806.9	-44.0	-5.76	*	2155.2	8.8	0.41
121	2832	-.896	34.914	2302.	2162.	11.0	1.00	757.0	*	809.5	-52.5	-6.94	*	2151.4	10.6	0.49
122	3028	-.863	34.921	2307.	2161.	10.9	0.98	760.2	*	782.0	-21.8	-2.87	*	2156.5	4.5	0.21
124	3154	-.842	34.926	2308.	2163.	10.8	0.98	757.8	*	787.9	-30.1	-3.98	*	2156.8	6.2	0.29

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	20	-29.4	12.54
DELPCO2/PCO2	20	-4.5	1.46
DELTCO2	20	7.3	2.23
DELTCO2/TCO2	20	0.3	0.10

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	DEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	158	71 9.7 N	7 29.3 W	5 8 81	2195

		MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	5	3.268	31.413	2094.	1885.	0.5	0.08	411.0D	*	405.0	6.0	1.45	*	1887.5	-2.5	-0.13
102	7	3.191	31.402	2102.	1890.	0.5	0.08	402.6	*	400.7	1.9	0.48	*	1890.8	-0.8	-0.04
103	19	1.768	33.488	2226.	1986.	0.6	0.12	389.0	*	400.4	-11.4	-2.94	*	1980.6	5.4	0.27
104	22	.35 I	33.897	2260.	2008.	0.7	0.14	396.6*	*	395.1	1.5	0.37	*	2008.7	-0.7	-0.03
105	31	-1.128	34.189	2270.	2068.	2.3	0.46	520.9	*	529.4	-8.5	-1.63	*	2065.2	2.8	0.14
106	46	-1.281	34.390	2272.	2109.	3.9	0.69	626.1	*	673.9	-47.8	-7.63	*	2097.0	12.0	0.57
107	56	-1.184	34.489	2281.	2116.	4.0	0.71	646.3	*	672.0	-25.7	-3.98	*	2109.6	6.4	0.30
108	75	-.943	34.625	2295.	2131.	5.2	0.79	680.2	*	685.8	-5.6	-0.82	*	2129.7	1.3	0.06
109	95	-.913	34.685	2289.	2137.	5.7	0.82	698.2*	*	737.4	-39.2	-5.61	*	2128.3	8.7	0.41
110	115	-.178	34.756	2287.	2131.	5.8	0.81	692.9	*	719.1	-26.2	-3.78	*	2125.0	6.0	0.28
111	147	-.18 I	34.821	2298.	2138.	5.9	0.82	694.6	*	708.3	-13.7	-1.97	*	2134.8	3.2	0.15
112	231	-.17 I	34.835	2301.	2141.	5.8	0.82	705.4	*	709.6	-4.2	-0.60	*	2140.0	1.0	0.05
113	282	-.17 I	34.848	2299.	2143.	5.9	0.82	707.0	*	726.7	-19.7	-2.79	*	2138.6	4.4	0.21
115	406	-.16 I	34.875	2298.	2149.	6.3	0.83	723.8	*	760.1	-36.3	-5.01	*	2141.2	7.8	0.36
116	507	-.155	34.878			6.6	0.87	720.6	*							
118	606	-.344	34.874	2309.	2159.	6.6	0.89	715.4	*	761.3	-45.9	-6.41	*	2149.0	10.0	0.46
120	807	-.496	34.901	2298.	2153.	7.8	0.93	744.9	*	780.4	-35.5	-4.77	*	2145.6	7.4	0.34
136	999	-.626	34.908	2303.	2159.	9.0	0.96	751.5	*	789.0	-37.5	-5.00	*	2151.3	7.7	0.36
133	1398	-.796	34.903	2304.	2160.	10.0	0.98	757.0*	*	790.0	-33.0	-4.36	*	2153.3	6.7	0.31
131	1798	-.900	34.909	2305.	2160.	10.7	0.99	742.5D	*	786.1	-43.6	-5.87	*	2150.9	9.1	0.42
130	1987	-.915	34.912	2300.	2155.	10.8	1.01	755.4	*	783.1	-27.7	-3.66	*	2149.3	5.7	0.26
127	2142	-.918	34.908	2306.	2163.	10.9	1.00	755.3*	*	796.4	-41.1	-5.44	*	2154.6	8.4	0.39
123	2201	-.918	34.907			11.0	0.99	752.8	*							
122	2201	-.918	34.907	2311.	2163.	11.0	0.99	754.2	*	774.6	-20.4	-2.70	*	2158.8	4.2	0.20
124	2202	-.918	34.909			11.0	1.00	758.3	*							

* DELTA PCO2 > 0.5 *

D ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	158	71 9.7 N	7 29.3 W	5 8 81	2195

			MEASURED QUANTITIES						CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
STATION STATISTICS														
		N	MEAN	SIGMA										
DELPCO2		22	-23.3	16.50										
DELPCO2/PCO2		22	-3.3	2.37										
DELTCO2		22	5.2	3.71										
DELTCO2/TCO2		22	0.2	0.18										

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	159	68 43.5 N	10 33.6 W	6 8 81	2161

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	5	6.065	34.676	2304.	2068.	1.0	0.09	455.2*	*	455.0	0.2	0.04	*	2068.1	-0.1	0.00
202	10	5.968	34.676	2298.	2070.	1.0	0.09	452.1	*	472.6	-20.5	-4.53	*	2061.7	8.3	0.40
440	11	5.116H	34.677		2061.	1.0	0.07	447.9	*							
203	14	5.884	34.675	2301.	2071.	0.9	0.09	460.6	*	468.7	-8.1	-1.75	*	2067.8	3.2	0.16
204	15	5.695	34.676	2298.	2067.	0.9	0.09	448.6*	*	465.0	-16.4	-3.66	*	2060.3	6.7	0.33
205	20	5.343	34.674	2306.	2069.	0.9	0.08	451.2	*	453.3	-2.1	-0.46	*	2068.1	0.9	0.04
206	26	5.208	34.674	2298.	2062.	0.9	0.07	442.8*	*	452.7	-9.9	-2.23	*	2057.8	4.2	0.20
207	30	3.677	34.690	2307.	2077.	1.3	0.15	462.5*	*	471.5	-9.0	-1.95	*	2073.4	3.6	0.17
208	30	1.582	34.720	2301.	2096.	2.2	0.32	526.6	*	539.5	-12.9	-2.45	*	2091.7	4.3	0.21
209	32	1.1 I	34.743	2305.	2132.	3.7	0.57	622.5	*	654.7	-32.2	-5.17	*	2123.5	8.5	0.40
210	36	.0 I	34.748	2300.	2137.	4.3	0.66	678.5	*	693.3	-14.8	-2.19	*	2133.5	3.5	0.17
211	41	-.127	34.750	2305.	2140.	4.4	0.70	687.4*	*	687.7	-0.3	-0.04	*	2139.9	0.1	0.00
212	50	-.454	34.754	2294.	2143.	4.8	0.76	713.3	*	744.7	-31.4	-4.40	*	2136.1	6.9	0.32
441	76	-.580H	34.784	2299.	2141.	4.9	0.76		*	716.0						
213	99	-.550	34.792	2302.	2153.	4.9	0.80	727.4	*	760.3	-32.9	-4.52	*	2145.9	7.1	0.33
442	201	-.472H	34.833	2293.	2148.	5.3	0.85		*	775.5						
214	204	-.497	34.832	2296.	2148.	5.3	0.86	745.5	*	763.0	-17.5	-2.35	*	2144.3	3.7	0.17
443	301	-.407H	34.863	2297.	2153.	5.5	0.88		*	783.6						
215	304	-.411	34.850	2304.	2153.	5.5	0.89	744.8*	*	753.0	-8.2	-1.10	*	2151.3	1.7	0.08
216	365	-.239	34.875	2297.	2153.	6.4	0.96	767.8*	*	785.3	-17.5	-2.28	*	2149.5	3.5	0.16
444	399	-.138H	34.896	2298.	2156.	6.8I	0.98I	768.5	*	796.4	-27.9	-3.64	*	2150.4	5.6	0.26
217	415	-.146	34.894	2301.	2160.	7.0	0.99	775.0	*	803.4	-28.4	-3.66	*	2154.4	5.6	0.26
445	500	-.259H	34.903	2300.	2160.	7.5	0.99		*	808.0						
218	505	-.261	34.903	2300.	2156.	7.6	1.01	773.5	*	787.7	-14.2	-1.84	*	2153.1	2.9	0.13
446	600	-.415H	34.909	2303.	2157.	8.0	1.01		*	779.9						

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	159	68 43.5 N	10 33.6 W	6 8 81	2161

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
219	656	-.477	34.903	2304.	2161.	8.3	1.00	773.7	*	795.0	-21.3	-2.75	*	2156.7	4.3	0.20
448	797	-.610H	34.911	2303.	2160.	9.2I	1.0 I	770.6	*							
220	806	-.607	34.909	2299.	2155.	9.2	1.01	778.4	*	787.8	-9.4	-1.21	*	2153.1	1.9	0.09
140	949	-.711H	34.911	2304.	2158.	9.8	1.03	775.0*	*	780.8	-5.8	-0.75	*	2156.8	1.2	0.05
141	1049	-.747H	34.910	2307.	2166.	10.1	1.03	770.8*	*	807.3	-36.5	-4.74	*	2158.7	7.3	0.34
142	1148	-.794H	34.909	2302.	2163.	10.4	1.03	775.3	*	815.5	-40.2	-5.19	*	2155.1	7.9	0.37
143	1248	-.825H	34.910	2307.	2163.	10.7	1.04	771.7	*	792.2	-20.5	-2.65	*	2158.9	4.1	0.19
144	1349	-.859H	34.909	2303.	2157.	10.9	1.04	771.4	*	780.6	-9.2	-1.19	*	2155.1	1.9	0.09
145	1547	-.875H	34.908	2310.	2164.	11.4	1.05	770.7	*	784.0	-13.3	-1.73	*	2161.3	2.7	0.13
146	1743	-.896H	34.909	2302.	2165.	11.9	1.07	786.7*	*	826.8	-40.1	-5.09	*	2157.3	7.7	0.36
147	1940	-.902H	34.908	2308.	2164.	12.5	1.07	794.3	*	793.3	1.0	0.13	*	2164.2	-0.2	-0.01
148	2140	-.885H	34.909	2303.	2164.	13.0	1.07	812.1*	*	816.9	-4.8	-0.59	*	2163.1	0.9	0.04
222	2168	-.887	34.908	2309.	2168.	13.0	1.06	785.5*	*	809.2	-23.7	-3.01	*	2163.3	4.7	0.21

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	31	-17.0	11.79
DELPCO2/PCO2	31	-2.5	1.61
DELTCO2	31	4.0	2.57
DELTCO2/TCO2	31	0.2	0.12

* DELTA PCO2 > 0.5 %

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TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	160	61 29.5 N	18 20.0 W	9 8 81	2286

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	9	11.381	35.073	2313.	2071.	0.8	0.37	427.7	450.1	-22.4	-5.23	2061.2	9.8	0.47
102	52	10.258	35.103	2318.		2.1	0.61	492.2*						
104	201	8.931	35.205	2321.	2125.	5.7	0.85	570.2	587.9	-17.7	-3.10	2119.6	5.4	0.25
106	396	8.402	35.181	2313.		6.3	0.93	587.1*						
108	696	7.045	35.119	2310.	2131.	8.1	1.06	653.9	643.8	10.1	1.55	2133.6	-2.6	-0.12
110	1004	5.433	35.011			10.9	1.21	741.3*						
111	1154	4.670	34.964	2308.	2159.	10.8	1.19		770.7					
113	1405	4.070	34.937	2308.	2156.	10.8	1.15	735.8	755.8	-20.0	-2.71	2151.7	4.3	0.20
117	1801	3.715	34.942	2300.	2144.	10.7	1.12	711.9	732.2	-20.3	-2.85	2139.5	4.5	0.21
121	2152	3.096	34.9760	2311.0	2156.	12.70	1.090	721.1	743.1	-22.0	-3.05	2151.1	4.9	0.23
123	2286	2.631	34.988	2301.	2151.	9.9	1.04	717.7	761.3	-43.6	-6.07	2141.5	9.5	0.44

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	7	-19.4	14.52
DELPCO2/PCO2	7	-3.1	2.24
DELTCO2	7	5.1	3.81
DELTCO2/TCO2	7	0.2	0.18

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

FTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	161	61 40.8 N	19 5.7 W	9 8 81	1879

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
281	2	11.3 I	35.103	2315.	2067.	0.6	0.33	418.8	437.1	-18.3	-4.36	2058.7	8.3	0.40
101	9	11.294	35.101	2318.		0.5	0.32	415.0*						
270	15	11.286H	35.102	2320.	2062.	0.6	0.34	417.4	416.9	0.5	0.12	2062.2	-0.2	-0.01
271	30	11.263H	35.102	2320.	2066.	0.5	0.33	421.1	425.5	-4.4	-1.04	2064.0	2.0	0.10
272	38	11.246H	35.102	2313.	2061.	0.5	0.33	417.2	427.4	-10.2	-2.44	2056.3	4.7	0.23
273	41	11.231H	35.102	2321.	2068.	0.5	0.33	422.2	428.0	-5.8	-1.38	2065.3	2.7	0.13
274	44	11.201H	35.102	2314.		0.6	0.35	421.1						
275	47	11.114H	35.106	2317.	2070.	0.7	0.38	387.3	440.3	-53.0	-13.68	2044.9	25.1	1.21
276	51	11.097H	35.119	2315.	2081.	1.2	0.47	406.2	471.3	-65.1	-16.03	2052.4	28.6	1.38
277	56	10.190H	35.128	2319.	2094.	1.7	0.56	432.4	496.9	-64.5	-14.93	2067.6	26.4	1.26
278	61	9.742H	35.144	2314.	2093.	2.1	0.66	456.5	506.2	-49.7	-10.89	2073.7	19.3	0.92
279	71	9.4 I	35.152	2320.	2121.	3.9	0.80	507.7	576.0	-68.3	-13.46	2098.2	22.8	1.07
280	91	8.8 I	35.155	2318.	2126.	4.9	0.85	518.2	599.0	-80.8	-15.60	2100.2	25.8	1.22
106	124	8.690	35.163	2314.		5.2	0.86	583.5						
107	184	8.395	35.167	2318.	2127.	5.9	0.90	595.3	603.2	-7.9	-1.33	2124.7	2.3	0.11
108	244	8.191	35.170	2318.	2127.	6.3	0.91	597.7	603.3	-5.6	-0.93	2125.4	1.6	0.08
110	404	7.790	35.190	2318.	2132.	6.4	0.92	602.6	621.6	-19.0	-3.16	2126.6	5.4	0.25
112	655	7.194	35.167	2315.	2140.	7.5	0.99	627.1	661.8	-34.7	-5.53	2130.9	9.1	0.43
114	906	6.177	35.085	2321.		10.0	1.13	712.8						
115	1006	5.880	35.085	2318.	2153.	9.4	1.08	689.7	704.1	-14.4	-2.08	2149.6	3.4	0.16
117	1257	4.801	35.033	2311.	2153.	9.2	1.06	702.6	729.8	-27.2	-3.87	2146.8	6.2	0.29
119	1550	3.729	34.999	2303.		9.7	1.05	704.0						
121	1800	2.764	34.989	2309.	2154.	10.5	1.03	712.4	741.5	-29.1	-4.09	2147.5	6.5	0.30
123	1887	2.668	34.992	2302.	2144.	9.7	1.01	715.4	724.4	-9.0	-1.26	2142.0	2.0	0.09

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	19	-29.8	25.15
DELPCO2/PCO2	19	-6.1	5.67
DELTCO2	19	10.6	9.94
DELTCO2/TCO2	19	0.5	0.47

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	152	61 51.5 N	19 56.5 W	9 8 81	1636

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	27	10.960	35.119	2318.	2061.	0.5	0.31	407.3	418.4	-11.1	-2.72	2055.7	5.3	0.26

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	1	-11.1	122.55
DELPCO2/PCO2	1	-2.7	7.39
DELTCO2	1	5.3	27.67
DELTCO2/TCO2	1	0.3	0.07

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	163	61 50.1 N	28 51.3 W	11 8 81	1765

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	* PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	11	9.880	34.826	2307.	2069.	0.3	0.39	434.9*	454.6	-19.7	-4.54	2060.6	8.4	0.41
102	38	8.512	34.918	2310.	2105.	3.1	0.70	530.1	548.7	-18.6	-3.50	2098.8	6.2	0.29
103	47	7.558	35.003	2315.	2126.	5.0	0.87	585.6*	606.3	-20.7	-3.53	2120.0	6.0	0.28
104	81	6.731	35.045	2315.	2140.	7.0	0.99	637.6	659.7	-22.1	-3.47	2134.2	5.8	0.27
105	114	6.806	35.088	2323.	2146.	7.5	1.00	643.4	656.7	-13.3	-2.07	2142.5	3.5	0.16
106	182	6.631	35.088	2318.	2142.	7.5	1.00	638.0*	658.2	-20.2	-3.16	2136.7	5.3	0.25
108	270	6.404	35.079	2323.	2143.	7.7	1.00	650.0	644.9	5.1	0.79	2144.3	-1.3	-0.06
110	401	5.687	35.003	2310.	2144.	8.3	1.04	670.0	694.1	-24.1	-3.59	2138.2	5.8	0.27
112	604	4.714	34.947	2313.	2158.	9.4	1.10	716.4	743.6	-27.2	-3.80	2152.0	6.0	0.28
114	803	4.086	34.909	2309.	2151.	9.1	1.08	708.2	727.2	-19.0	-2.68	2146.7	4.3	0.20
116	1002	3.785	34.894	2304.	2151.	9.7	1.09	725.0	747.3	-22.3	-3.08	2146.1	4.9	0.23
117	1102	3.951	34.943	2311.	2158.	10.2	1.09	722.8	752.0	-29.2	-4.03	2151.6	6.4	0.30
119	1348	3.881	34.957	2311.	2156.	10.4	1.08	724.4	742.4	-18.0	-2.49	2152.0	4.0	0.18
121	1595	3.832	34.955	2308.	2154.	10.7	1.08	721.0	745.6	-24.6	-3.41	2148.6	5.4	0.25
123	1747	3.747	34.952	2314.	2155.	11.0	1.09	703.9D	726.0	-22.1	-3.14	2149.9	5.1	0.23

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	15	-19.7	7.62
DELPCO2/PCO2	15	-3.0	1.18
DELTCO2	15	5.0	2.05
DELTCO2/TCO2	15	0.2	0.10

* DELTA PCO2 > 0.5 %

D ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	164	62 30.5 N	30 24.0 W	11 8 81	2517

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	5	10.108	34.853	2313.	2064.	0.2	0.35	420.8*	431.2	-10.4	-2.47	2059.3	4.7	0.23
540	10	10.116H	34.848	2314.	2062.	0.5	0.34	425.5*	424.6	0.9	0.20	2062.4	-0.4	-0.02
102	14	10.022	34.852	2317.	2062.	0.1	0.36	423.8	419.2	4.6	1.09	2064.1	-2.1	-0.10
103	30	9.876	34.833	2312.	2068.	0.2	0.38	428.4*	441.9	-13.5	-3.15	2062.1	5.9	0.29
104	35	8.837	34.830	2303.	2079.	2.2	0.58	488.2	489.6	-1.4	-0.29	2078.5	0.5	0.03
105	37	7.757	34.850	2311.	2105.	4.0	0.73	527.9*	545.0	-17.1	-3.25	2099.3	5.7	0.27
106	54	6.339	34.898	2308.	2134.	6.6	0.96	632.5	657.7	-25.2	-3.99	2127.4	6.6	0.31
541	100	6.345H	35.026	2312.	2136.	7.8	0.99	648.1	654.3	-6.2	-0.95	2134.4	1.6	0.07
107	104	6.232	34.998	2313.	2142.	7.6	1.01	645.7*	674.2	-28.5	-4.41	2134.8	7.2	0.34
542	199	6.198H	35.040	2320.	2145.	8.0	1.00	645.9	662.4	-16.5	-2.55	2140.7	4.3	0.20
109	354	5.525	34.995	2315.	2149.	8.4	1.06	675.9	696.4	-20.5	-3.03	2144.1	4.9	0.23
543	398	5.265H	34.972	2311.	2148.	9.0	1.07	688.6	706.7	-18.1	-2.63	2143.7	4.3	0.20
544	593	4.586H	34.947	2314.	2158.	9.6	1.09	709.7	739.5	-29.8	-4.20	2151.3	6.7	0.31
111	639	4.490	34.940	2316.	2159.	9.5	1.11	712.2	735.7	-23.5	-3.30	2153.7	5.3	0.24
340	767	4.201H	34.919	2306.	2146.	9.3	1.09	709.0*	716.7	-7.7	-1.09	2144.2	1.8	0.08
341	868	3.931H	34.897	2310.	2152.	9.4	1.08	705.7	726.9	-21.2	-3.01	2147.2	4.8	0.22
114	946	3.899	34.907	2306.	2154.	9.4	1.10	721.2	753.5	-32.3	-4.47	2147.0	7.0	0.33
342	1056	3.901H	34.924	2310.	2149.	10.1	1.09	725.7	714.8	10.9	1.50	2151.4	-2.4	-0.11
343	1259	3.741H	34.924	2310.	2156.	10.3	1.09	719.4	746.5	-27.1	-3.77	2150.0	6.0	0.28
344	1358	3.739H	34.931	2308.	2155.	10.4	1.08	723.8	749.5	-25.7	-3.55	2149.4	5.6	0.26
119	1585	3.762	34.953	2316.	2160.	10.8	1.09	720.8*	740.6	-19.8	-2.75	2155.6	4.4	0.20
345	1746	3.595H	34.939		2155.	11.1	1.08	716.8						
346	1946	3.459H	34.943	2308.	2150.	11.6	1.08	721.8	727.5	-5.7	-0.80	2148.7	1.3	0.06
347	2241	3.362H	34.948	2316.	2161.	12.4	1.08	717.7	744.9	-27.2	-3.80	2155.0	6.0	0.28
123	2373	3.346	34.954	2310.	2152.	12.8	1.09	720.7D	729.2	-8.5	-1.17	2150.1	1.9	0.09

* DELTA PCO2 > 0.5 %

D ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	164	62 30.5 N	30 24.0 W	11 8 81	2517

			MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
348	2499	3.314H	34.949	2312.	2157.	12.8	1.08	721.7	*	743.4	-21.7	-3.00	*	2152.2	4.8	0.22

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	25	-15.6	11.32
DELPCO2/PCO2	25	-2.4	1.66
DELTCO2	25	3.9	2.74
DELTCO2/TCO2	25	0.2	0.13

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	167	64 5.1 N	33 18.6 W	13 8 81	2314

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	10	10.087	34.950	2323.	2057.	0.3	0.23	400.7	*	399.2	1.5	0.38	*	2057.8	-0.8	-0.04
440	13	10.049H	34.947	2322.	2058.	0.2	0.28	408.1*	*	403.1	5.0	1.23	*	2060.4	-2.4	-0.12
102	30	8.323	34.985	2320.	2095.	2.5	0.58	490.0	*	495.4	-5.4	-1.10	*	2093.0	2.0	0.10
103	40	7.020	35.008	2318.	2125.	4.6	0.85	583.6	*	593.2	-9.6	-1.64	*	2122.2	2.8	0.13
104	68	6.270	35.045	2316.	2141.	7.0	0.99	645.7	*	660.2	-14.5	-2.25	*	2137.3	3.7	0.17
441	104	6.086H	35.054	2319.	2146.	7.4	0.99	657.1	*	670.0	-12.9	-1.96	*	2142.7	3.3	0.15
442	203	5.668H	35.023	2319.	2146.	8.0	1.02	662.0	*	669.3	-7.3	-1.11	*	2144.2	1.8	0.09
640	296	5.207H	34.992	2314.	2150.	8.3	1.03	677.2*	*	704.2	-27.0	-3.98	*	2143.5	6.5	0.30
641	396	4.785H	34.962	2312.	2153.	8.7	1.06	693.2	*	724.8	-31.6	-4.56	*	2145.7	7.3	0.34
642	493	4.619H	34.964	2311.	2150.	8.7	1.06	695.0*	*	715.4	-20.4	-2.93	*	2145.3	4.7	0.22
643	639	4.366H	34.944	2314.	2149.	8.8	1.06	701.8	*	698.9	2.9	0.41	*	2149.7	-0.7	-0.03
644	837	3.954H	34.915	2311.	2157.	9.4	1.07	719.2	*	746.4	-27.2	-3.78	*	2151.0	6.0	0.28
111	855	3.856	34.899	2308.	2150.	9.5	1.08	714.2S	*	725.9	-11.7	-1.64	*	2147.4	2.6	0.12
645	1080	3.726H	34.912	2309.	2154.	9.9	1.07	728.8	*	740.3	-11.5	-1.58	*	2151.5	2.5	0.12
646	1233	3.713H	34.923	2307.	2155.	10.0	1.07	721.3	*	753.6	-32.3	-4.48	*	2147.9	7.1	0.33
647	1468	3.590H	34.924	2309.	2155.	10.3	1.07	718.0*	*	745.8	-27.8	-3.88	*	2148.9	6.1	0.28
648	1662	3.542H	34.932	2313.	2156.	10.7	1.07	716.4	*	734.1	-17.7	-2.47	*	2152.0	4.0	0.18
116	1805	3.422	34.947	2312.	2152.	11.5	1.07	719.4	*	720.5	-1.1	-0.15	*	2151.7	0.3	0.01
240	1966	3.273H	34.942	2314.	2159.	12.0	1.07	721.2	*	743.8	-22.6	-3.14	*	2154.0	5.0	0.23
118	2106	2.940	34.930	2309.	2156.	11.2	1.04	716.4	*	750.3	-33.9	-4.73	*	2148.5	7.5	0.35
241	2124	2.863H	34.920	2314.	2155.	10.9	1.02	716.0	*	725.3	-9.3	-1.30	*	2152.9	2.1	0.10
242	2201	1.564H	34.824	2303.	2148.	7.6	0.90	707.6	*	734.6	-27.0	-3.81	*	2142.0	6.0	0.28
120	2218	1.155	34.823	2302.	2144.	7.4	0.89	713.5	*	719.9	-6.4	-0.90	*	2142.6	1.4	0.07
243	2262	1.063H	34.858	2306.	2152.	7.8	0.90	715.8	*	741.3	-25.5	-3.56	*	2146.4	5.6	0.26
122	2269	1.1 I	34.871	2302.	2149.	8.0	0.91	723.7	*	743.8	-20.1	-2.78	*	2144.6	4.4	0.20

* DELTA PCO2 > 0.5 %

S SINGLE ANALYSIS

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	167	64 5.1 N	33 18.6 W	13 8 81	2314

				MEASURED QUANTITIES						CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)		SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
123	2301	1.1	I	34.880	2303.	2155.	8.1	0.91	723.9D	768.0	-44.1	-6.09	2145.5	9.5	0.44
248	2317	1.1	I	34.878	2308.	2152.	8.0	0.90	737.0	733.0	4.0	0.55	2152.9	-0.9	-0.04

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	27	-16.1	12.83
DELPCO2/PCO2	27	-2.3	1.82
DELTCO2	27	3.6	2.91
DELTCO2/TCO2	27	0.2	0.14

D ANALYZED EARLIER OR LATER THAN ADJACENT SAMPLES

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	168	64 20.6 N	33 42.3 W	13 8 81	1917

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	11	9.957	34.975	2324.	2063.	0.7	0.20	397.3	410.1	-12.8	-3.21	2056.7	6.3	0.30
104	31	8.876	34.989	2324.	2082.	2.1	0.41	454.7	453.2	1.5	0.33	2082.6	-0.6	-0.03
105	50	7.349	35.019	2320.	2117.	3.8	0.70	543.1	560.5	-17.4	-3.21	2111.4	5.6	0.27
106	98	6.194	35.040	2319.	2142.	6.4	0.93	625.9	653.4	-27.5	-4.39	2134.7	7.3	0.34
107	153	5.986	35.056	2316.	2146.	7.5	0.98	649.6*	680.6	-31.0	-4.77	2138.2	7.8	0.36
113	900	3.949	34.911	2311.	2157.	9.7	1.07	712.6	746.5	-33.9	-4.75	2149.5	7.5	0.35
115	1195	3.791	34.930	2313.	2157.	10.2	1.06	723.1	738.5	-15.4	-2.13	2153.6	3.4	0.16
117	1598	2.864	34.902	2317.	2159.	9.9	1.00		730.3					
118	1666	2.776	34.934			12.4	1.04	713.2						
122	1856	1.0 I	34.839	2315.	2165.	7.4	0.89		764.5					
123	1890	1.0 I	34.870			8.1	0.91	729.2						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	7	-19.5	11.39
DELPCO2/PCO2	7	-3.2	1.68
DELTCO2	7	5.3	2.80
DELTCO2/TCO2	7	0.3	0.13

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	169	64 38.6 N	34 5.1 W	13 8 81	1281

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
340	19	9.733H	34.997	2319.	2064.	0.7	0.27		421.5					
341	149	6.123H	35.057	2319.	2148.	7.7	1.02		678.3					
342	349	5.713H	35.046	2320.	2150.	8.1	1.04		682.8					
343	547	5.069H	34.992	2315.	2150.	8.6	1.07		700.8					
344	747	4.427H	34.949	2313.	2153.	9.1	1.08		720.7					
345	934	3.873H	34.923	2309.	2155.	9.6	1.08		745.3					
346	1032	3.483H	34.896	2304.	2145.	8.9	1.05		719.5					
347	1119	3.269H	34.905	2310.	2156.	9.3	1.05		745.8					
348	1228	2.556H	34.887	2309.	2155.	9.7	1.02		744.3					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	DEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	170	65 6.0 N	34 30.6 W	14 8 81	332

		MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
109	5	3.767	33.034	2238.	2023.	0.2	0.21	444.9	*	463.4	-18.5	-4.16	* 2015.7	7.3	0.36
240	12	4.597H	33.662	2266.	2042.	0.4	0.26		*	458.8					
110	22	5.022	33.777	2271.	2045.	0.3	0.27	447.4	*	457.3	-9.9	-2.22	* 2041.0	4.0	0.20
111	31	5.118	34.083	2286.	2069.	1.4	0.40	484.0	*	490.8	-6.8	-1.42	* 2066.5	2.5	0.12
112	50	3.370	34.267	2290.	2101.	3.5	0.61	559.8	*	581.8	-22.0	-3.93	* 2094.4	6.6	0.32
241	52	4.142H	34.417	2294.	2108.	3.8	0.65		*	596.8					
113	73	3.493	34.487	2297.	2116.	4.7	0.73	604.0*	*	617.8	-13.8	-2.28	* 2112.2	3.8	0.18
114	100	4.252	34.726	2307.	2130.	5.7	0.85	625.1	*	642.2	-17.1	-2.73	* 2125.5	4.5	0.21
242	106	5.206H	34.859	2314.	2133.	6.0	0.89		*	632.4					
116	155	5.393	34.966	2316.	2146.	6.8	0.97	652.3	*	678.8	-26.5	-4.06	* 2139.3	6.7	0.31
243	173	5.672H	35.041	2320.	2152.	7.8	1.02		*	690.9					
117	181	4.828	34.916	2313.	2143.	6.9	0.96	652.2	*	676.0	-23.8	-3.65	* 2137.0	6.0	0.28
118	215	4.837	34.973	2312.	2152.	8.2	1.04	683.1	*	720.4	-37.3	-5.47	* 2143.3	8.7	0.41
244	267	4.693H	34.971	2316.	2152.	8.5	1.05		*	705.2					
124	331	4.585	34.961	2317.	2155.	8.3	1.04	681.9	*	713.4	-31.5	-4.62	* 2147.6	7.4	0.35

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	10	-20.7	9.01
DELPCO2/PCO2	10	-3.5	1.19
DELTCO2	10	5.8	1.85
DELTCO2/TCO2	10	0.3	0.09

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	5	171	63 40.0 N	33 19.0 W	14 8 81	2741

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
340	23	10.138H	34.838	2316.	2062.	0.6	0.30	417.0*	*	420.9	-3.9	-0.94	*	2060.2	1.8	0.09
341	77	5.999H	34.948	2313.	2131.	5.6	0.90	603.5	*	629.4	-25.9	-4.28	*	2123.8	7.2	0.34
342	152	4.819H	34.935	2313.	2151.	8.3	1.07	681.9	*	711.5	-29.6	-4.34	*	2144.0	7.0	0.32
240	334	4.392H	34.939	2316.	2161.	8.8	1.08	698.1*	*	745.0	-46.9	-6.72	*	2150.4	10.6	0.49
241	529	4.128H	34.925	2314.	2161.	9.4	1.10	713.7	*	752.8	-39.1	-5.48	*	2152.4	8.6	0.40
242	728	3.702H	34.883	2319.	2155.	9.0	1.09	717.1	*	705.3	11.8	1.64	*	2157.7	-2.7	-0.13
243	1119	3.624H	34.907	2309.	2159.	9.9	1.10	721.0	*	764.7	-43.7	-6.06	*	2149.6	9.4	0.44
244	1509	3.491H	34.917	2313.	2159.	10.3	1.09	719.1	*	747.7	-28.6	-3.98	*	2152.7	6.3	0.29
245	2049	3.288H	34.945	2315.	2159.	11.5	1.09	713.5	*	740.3	-26.8	-3.75	*	2153.0	6.0	0.28
246	2378	2.982H	34.938	2319.	2166.	12.3	1.07	716.1	*	755.9	-39.8	-5.55	*	2157.2	8.8	0.40
247	2572	2.429H	34.905	2312.	2156.	10.4	1.01	709.5	*	737.4	-27.9	-3.93	*	2149.7	6.3	0.29
248	2730	1.067H	34.874	2316.	2159.	8.6	0.93	721.4	*	733.0	-11.6	-1.60	*	2156.4	2.6	0.12

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-26.0	16.48
DELPCO2/PCO2	12	-3.7	2.29
DELTCO2	12	6.0	3.59
DELTCO2/TCO2	12	0.3	0.17

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	172	58 29.1 N	30 0.2 W	23 8 81	1931

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
272	2	11.128H	34.919					431.4						
124	12	11.103	34.916			0.9	0.36	430.1						
101	18	11.110	34.913	2306.	2067.	0.8	0.36	424.9	452.7	-27.8	-6.54	2054.9	12.1	0.59
273	35	11.122H	34.919					421.6						
274	45	9.894H	34.977					508.1						
275	48	9.844H	34.979					509.5						
276	51	9.791H	34.983					518.2						
102	52	10.006	34.979	2320.	2102.	2.4	0.62	494.6	514.9	-20.3	-4.10	2094.6	7.4	0.35
277	54	9.688H	34.988					519.3						
278	57	9.376H	34.998					535.1						
279	60	8.950H	35.004					563.5						
280	65	8.787H	35.005					576.8						
103	74	8.420	34.998	2311.	2135.	5.7	0.92	605.1	652.4	-47.3	-7.82	2122.2	12.8	0.60
104	100	8.192	35.017	2312.	2134.	6.2	0.95	609.8	645.7	-35.9	-5.89	2124.2	9.8	0.46
105	152	7.723	35.017	2315.	2140.	6.5	0.98	628.5	659.0	-30.5	-4.86	2132.0	8.0	0.38
106	204	7.462	35.026			7.4	1.03	647.2						
107	258	6.987	35.034		2150.	8.5	1.08	674.1						
108	309	6.839	35.050	2313.		8.5	1.08	670.7						
109	350	6.822	35.062	2316.	2150.	8.4	1.07	666.8	698.0	-31.2	-4.68	2142.4	7.6	0.35
110	401	6.761	35.084	2316.	2148.	8.3	1.06	660.8	690.1	-29.3	-4.43	2140.8	7.2	0.34
111	450	6.695	35.094	2332.	2147.	8.3	1.06	660.7	631.2	29.5	4.47	2154.8	-7.8	-0.36
112	501	6.546	35.100	2319.	2145.	8.3	1.06	659.6	667.4	-7.8	-1.18	2143.0	2.0	0.09
113	627	6.302	35.097	2313.	2147.	8.4	1.06	666.0	696.8	-30.8	-4.63	2139.5	7.5	0.35
114	743	5.890	35.069	2314.	2151.	9.3	1.09	691.9	710.4	-18.5	-2.68	2146.6	4.4	0.20
115	810	5.169	35.008	2311.	2160.	10.5	1.15	734.0	762.7	-28.7	-3.90	2153.9	6.1	0.28

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	172	58 29.1 N	30 0.2 W	23 8 81	1931

		MEASURED QUANTITIES							*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
116	891	4.821	34.986	2310.	2160.	10.4	1.15	734.6	*	767.2	-32.6	-4.44	2153.0	7.0	0.32
117	967	4.638	34.982	2313.	2157.	10.1	1.13	727.7	*	739.9	-12.2	-1.68	2154.3	2.7	0.12
118	1068	4.426	34.979	2309.	2153.	9.9	1.11	723.3	*	737.6	-14.3	-1.98	2149.8	3.2	0.15
119	1227	4.112	34.969	2306.	2152.	9.9	1.10	713.1	*	745.3	-32.2	-4.52	2144.9	7.1	0.33
120	1328	3.965	34.977	2305.	2148.	9.7	1.07	709.9	*	730.7	-20.8	-2.92	2143.3	4.7	0.22
121	1628	3.333	34.990	2309.	2150.	10.5	1.05	706.0	*	724.0	-18.0	-2.55	2145.9	4.1	0.19
122	1833	3.158	34.991	2312.	2152.	10.7	1.05	717.5	*	720.6	-3.1	-0.44	2151.3	0.7	0.03
123	1903	3.159	34.991	2310.	2155.	10.8	1.05	714.5	*	742.2	-27.7	-3.88	2148.8	6.2	0.29

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	20	-22.0	15.57
DELPCO2/PCO2	20	-3.4	2.52
DELTCO2	20	5.6	4.31
DELTCO2/TCO2	20	0.3	0.20

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	173	57 21.2 N	34 38.0 W	24 8 81	2347

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	15	9.910	34.656	2308.	2079.	1.3	0.49	460.1	475.6	-15.5	-3.37	2072.8	6.2	0.30
102	72	6.537	34.908			6.6	0.97	637.8						
103	103	6.306	34.947	2334.	2155.	7.4	1.02	655.4	652.1	3.3	0.51	2155.9	-0.9	-0.04
104	133	6.257	34.974	2319.	2147.	7.6	1.02	652.1	672.5	-20.4	-3.13	2141.8	5.2	0.24
105	193	6.087	34.981	2318.	2150.	7.6	1.02	653.9	688.8	-34.9	-5.33	2141.3	8.7	0.40
106	284	5.425	34.916	2317.	2148.	7.8	1.04	665.4	682.8	-17.4	-2.62	2143.7	4.3	0.20
107	364	5.134	34.901	2316.	2156.	7.8	1.04	666.2	720.5	-54.3	-8.15	2143.1	12.9	0.60
108	464	5.058	34.904	2319.	2146.	7.7	1.03	658.1	667.6	-9.5	-1.45	2143.6	2.4	0.11
109	565	5.017	34.907	2315.	2147.	7.9	1.04	668.6	686.5	-17.9	-2.68	2142.6	4.4	0.20
110	655	4.783	34.905	2312.	2149.	8.6	1.07	691.7	706.5	-14.8	-2.15	2145.5	3.5	0.16
111	805	4.231	34.882	2313.	2158.	9.2	1.10	714.9	742.0	-27.1	-3.79	2152.0	6.0	0.28
112	954	3.745	34.857	2314.	2165.	9.2	1.09	725.2	770.6	-45.4	-6.26	2155.3	9.7	0.45
114	1054	3.521	34.840	2313.	2156.	8.9	1.08	722.3	732.2	-9.9	-1.36	2153.8	2.2	0.10
115	1105	3.481	34.840	2318.	2163.	8.9	1.08	716.7	743.9	-27.2	-3.80	2157.0	6.0	0.28
116	1154	3.497	34.845	2311.	2154.	9.1	1.08	719.7	731.6	-11.9	-1.65	2151.4	2.6	0.12
117	1200	3.479	34.845	2298.	2144.	9.0	1.08	720.9	738.5	-17.6	-2.44	2140.1	3.9	0.18
118	1288	3.593	34.872	2309.	2157.	9.6	1.09	730.5	754.0	-23.5	-3.21	2151.9	5.1	0.24
119	1490	3.600	34.897			10.2	1.10	730.6						
120	1681	3.596	34.923	2316.	2161.	10.5	1.09	725.5	744.6	-19.1	-2.63	2156.8	4.2	0.19
121	1878	3.589	34.948		2159.	10.9	1.08	720.8						
122	2101	3.524	34.958	2333.	2169.	11.3	1.07	715.5	714.0	1.5	0.21	2169.3	-0.3	-0.02
123	2239	3.453	34.963	2316.	2162.	11.8	1.07	713.6	749.7	-36.1	-5.06	2154.0	8.0	0.37
124	2338	3.415	34.962	2321.	2163.	12.5	1.07	719.6	734.5	-14.9	-2.07	2159.7	3.3	0.15

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	20	-20.6	13.76
DELPCO2/PCO2	20	-3.0	2.00
DELTCO2	20	4.9	3.18
DELTCO2/TCO2	20	0.2	0.15

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	174	57 38.7 N	35 28.5 W	25 8 81	2644

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	6	10.163	34.676	2309.	2076.	0.7	0.45		465.8					
105	253	6.089	34.970	2324.	2148.	7.7	1.02		659.1					
109	755	3.982	34.872	2308.	2162.	9.7	1.13		782.9					
113	1218	3.678	34.903	2322.	2154.	8.7	1.07		689.9					
117	1672	3.583	34.931	2314.	2163.	10.7	1.10		762.3					
121	2422	3.250	34.960	2324.	2164.	12.7	1.10		727.4					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

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TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	175	58 0.0 N	36 25.0 W	25 8 81	2721

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	9	9.462	34.627	2302.	2082.	0.8	0.54	475.7	496.7	-21.0	-4.42	2074.0	8.0	0.38
102	79	6.823	34.772	2310.	2127.	5.6	0.88	606.3	621.8	-15.5	-2.55	2122.7	4.3	0.20
103	149	5.154	34.877	2315.	2151.	8.3	1.06	680.4	703.0	-22.6	-3.33	2145.6	5.4	0.25
104	198	4.947	34.891	2315.	2155.	8.8	1.08	699.2	720.5	-21.3	-3.05	2150.1	4.9	0.23
105	249	4.602	34.882	2314.	2157.	9.1	1.10	713.3	733.3	-20.0	-2.81	2152.5	4.5	0.21
106	339	4.414	34.893	2317.	2159.	9.7	1.15	731.2	731.2	0.0	0.00	2159.0	0.0	0.00
107	416	4.465	34.930	2317.	2168.	10.3	1.15	742.1	774.5	-32.4	-4.37	2161.2	6.8	0.32
108	505	4.150	34.908			10.2	1.14	744.6						
109	645	3.704	34.873	2314.	2159.	9.3	1.09	726.8	743.0	-16.2	-2.23	2155.4	3.6	0.17
111	873	3.565	34.872	2315.	2161.	9.7	1.10	729.4	747.9	-18.5	-2.53	2157.0	4.0	0.19
112	1075	3.620	34.902			10.2	1.10	726.7						
113	1275	3.537	34.912	2316.	2160.	10.5	1.10	720.1	739.7	-19.6	-2.73	2155.6	4.4	0.20
114	1526	3.566	34.945	2321.	2162.	10.9	1.09	718.3	729.7	-11.4	-1.59	2159.4	2.6	0.12
115	1772	3.473	34.954	2318.	2162.	11.3	1.09	719.2	742.2	-23.0	-3.20	2156.9	5.1	0.24
116	1970	3.419	34.963	2317.	2163.	11.7	1.09	718.3	750.4	-32.1	-4.47	2155.9	7.1	0.33
117	2070	3.359	34.962	2321.	2163.	12.1	1.09	719.4	734.6	-15.2	-2.12	2159.6	3.4	0.16
118	2169	3.298	34.960	2319.	2165.	12.3	1.09	719.4	752.1	-32.7	-4.54	2157.8	7.2	0.33
119	2269	3.236	34.959	2322.	2163.	12.7	1.09	721.4	730.3	-8.9	-1.23	2161.0	2.0	0.09
120	2366	3.173	34.954	2321.	2165.	13.0	1.09	719.2	744.0	-24.8	-3.45	2159.5	5.5	0.25
121	2497	3.100	34.953	2320.	2164.	13.3	1.09	726.1	743.1	-17.0	-2.34	2160.3	3.7	0.17
122	2596	3.034	34.952	2320.	2164.	13.5	1.09	720.2	743.1	-22.9	-3.18	2158.9	5.1	0.23
123	2648	3.029	34.952	2323.	2165.	13.5	1.09	720.4	735.5	-15.1	-2.10	2161.6	3.4	0.16
124	2699	3.030	34.951	2319.	2164.	13.5	1.09	725.8	747.2	-21.4	-2.95	2159.3	4.7	0.22

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	21	-19.6	7.56
DELPCO2/PCO2	21	-2.8	1.10
DELTCO2	21	4.6	1.80
DELTCO2/TCO2	21	0.2	0.08

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	SIN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	177	58 40.0 N	38 15.5 W	26 8 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
440	9	8.253H	34.574	2308.	2085.	1.6	0.52		490.3					
301	103	3.369	34.722	2306.	2151.	8.1	1.04	705.0	735.2	-30.2	-4.28	2144.2	6.8	0.31
302	192	3.074	34.766	2304.	2153.	8.5	1.08	725.6	754.1	-28.5	-3.93	2146.8	6.2	0.29
303	253	3.073	34.778	2308.	2150.	8.5	1.07	724.8	723.7	1.1	0.15	2150.2	-0.2	-0.01
441	299	3.088H	34.781	2305.	2153.	8.5	1.06		750.1					
304	444	3.221	34.809	2308.	2154.	8.7	1.07	717.8	743.1	-25.3	-3.52	2148.4	5.6	0.26
442	498	3.231H	34.811	2308.	2149.	8.6	1.07		720.3					
305	504	3.297	34.823	2309.	2151.	8.6	1.07	713.2	725.2	-12.0	-1.68	2148.3	2.7	0.13
443	597	3.245H	34.818	2309.	2152.	8.6	1.06		729.2					
306	604	3.288	34.825			8.6	1.07	709.8						
307	681	3.310	34.829	2307.	2153.	8.6	1.07	709.9	742.3	-32.4	-4.57	2145.8	7.2	0.33
444	747	3.264H	34.823	2315.	2154.	8.5	1.06		714.8					
308	755	3.342	34.841	2315.	2154.	8.6	1.07	711.7	715.7	-4.0	-0.56	2153.1	0.9	0.04
309	830	3.313	34.832	2308.	2151.	8.7	1.07	711.7	729.5	-17.8	-2.51	2147.0	4.0	0.19
445	896	3.282H	34.829	2312.	2153.	9.0	1.08		722.3					
310	905	3.290	34.832	2314.	2160.	9.0	1.08	720.6	746.5	-25.9	-3.60	2154.3	5.7	0.26
446	996	3.324H	34.840	2310.	2149.	9.3	1.09		712.9					
311	1005	3.337	34.844	2309.	2156.	9.3	1.09	729.2	748.6	-19.4	-2.66	2151.8	4.2	0.20
312	1254	3.447	34.876	2318.	2161.	10.0	1.11	726.1	735.7	-9.6	-1.32	2158.9	2.1	0.10
240	1360	3.435H	34.882	2315.	2158.	10.0	1.11		734.1					
241	1510	3.401H	34.888	2317.	2155.	10.1	1.10		713.6					
313	1550	3.392	34.889	2315.	2157.	10.3	1.10	720.9	729.9	-9.0	-1.25	2155.0	2.0	0.09
242	1807	3.421H	34.923	2315.	2158.	10.9	1.10		735.0					
314	1847	3.416	34.925	2319.	2160.	11.1	1.11	722.2	755.7	-33.5	-4.64	2158.7	7.3	0.34
315	2088	3.359	34.947	2317.	2162.	11.7	1.09	716.8	745.9	-29.1	-4.06	2155.5	6.5	0.30

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	177	58 40.0 N	38 15.5 W	26 8 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
243	2106	3.359B	34.952	2322.	2166.	11.7	1.09		743.9					
316	2335	3.165	34.948	2319.	2166.	12.5	1.09	718.5	756.0	-37.5	-5.21	2157.8	8.2	0.38
244	2403	3.123B	34.950	2321.	2163.	12.8	1.09		734.4					
317	2587	3.006	34.953	2320.	2165.	13.6	1.09	722.3	747.7	-25.4	-3.52	2159.4	5.6	0.26
245	2706	2.897B	34.944	2319.	2164.	13.3	1.08		746.7					
318	2792	2.787	34.932	2322.	2160.	12.7	1.07	716.6	716.7	-0.1	-0.01	2160.0	0.0	0.00
246	2905	2.689B	34.935	2322.	2164.	13.5	1.07		734.6					
319	2993	2.462	34.916	2316.	2162.	12.0	1.04	720.6	748.6	-28.0	-3.89	2155.8	6.2	0.29
320	3104	1.875	34.892	2312.	2160.	9.3	0.97	716.6	755.2	-38.6	-5.39	2151.5	8.5	0.39
448	3126	1.592B	34.885	2316.	2159.	8.9	0.95		733.5					
321	3159	1.431	34.885			8.7	0.94	717.7						
322	3161	1.390	34.886	2313.	2154.	8.8	0.94	721.5	722.9	-1.4	-0.19	2153.7	0.3	0.01
323	3179	1.301	34.881	2311.	2156.	8.9	0.94	716.8	740.0	-23.2	-3.24	2150.8	5.2	0.24
324	3179	1.301	34.879	2309.	2157.	8.8	0.94	716.3	752.9	-36.6	-5.11	2149.0	8.0	0.37

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-21.7	12.44
DELPCO2/PCO2	22	-3.0	1.74
DELTCO2	22	4.7	2.73
DELTCO2/TCO2	22	0.2	0.13

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	179	59 14.8 N	39 59.6 W	26 8 81	2923

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
240	5	7.715H	34.666	2311.	2092.	2.0	0.56	483.9	504.0	-20.1	-4.16	2084.5	7.5	0.36
101	13	7.716	34.634	2310.	2092.	2.4	0.59	493.2	506.1	-12.9	-2.62	2087.3	4.7	0.23
103	94	3.688	34.812	2316.	2153.	8.4	1.06	710.7	706.3	4.4	0.62	2154.0	-1.0	-0.05
241	184	3.224H	34.801		2153.	8.4	1.07	716.3						
105	205	3.282	34.810	2308.	2156.	8.6	1.08	719.5	752.0	-32.5	-4.52	2148.9	7.1	0.33
242	482	3.343H	34.835	2316.	2155.	8.4	1.06	711.6	715.2	-3.6	-0.51	2154.2	0.8	0.04
107	554	3.454	34.851	2321.	2152.	8.7	1.07	710.4	684.5	25.9	3.64	2158.1	-6.1	-0.28
243	681	3.335H	34.839	2308.	2155.	8.6	1.06	714.0	748.2	-34.2	-4.79	2147.4	7.6	0.35
109	792	3.542	34.870	2312.	2157.	8.8	1.07	710.0	741.3	-31.3	-4.41	2150.0	7.0	0.32
111	995	3.419	34.863	2313.	2160.	9.6	1.09	728.9	751.0	-22.1	-3.03	2155.2	4.8	0.22
244	1227	3.455H	34.888	2318.	2164.	9.9	1.09	720.6	750.1	-29.5	-4.10	2157.5	6.5	0.30
113	1310	3.437	34.889	2313.	2161.	10.1	1.09	725.1	756.4	-31.3	-4.32	2154.2	6.8	0.32
245	1773	3.387H	34.929		2164.	10.9	1.08	716.1						
115	1776	3.372	34.925	2315.	2161.	11.0	1.09	719.2	748.8	-29.6	-4.11	2154.5	6.5	0.30
246	2256	3.032H	34.947	2323.	2165.	12.9	1.07	721.7	735.3	-13.6	-1.89	2162.0	3.0	0.14
117	2294	3.051	34.946	2321.	2165.	12.8	1.08	721.3	743.0	-21.7	-3.01	2160.2	4.8	0.22
119	2681	2.290	34.890	2314.	2155.	9.7	0.99	714.7	724.3	-9.6	-1.35	2152.8	2.2	0.10
247	2759	1.620H	34.875	2308.	2156.	8.6	0.94	717.4	752.4	-35.0	-4.88	2148.3	7.7	0.36
121	2803	1.623	34.874	2310.	2157.	8.5	0.94	715.2	748.3	-33.1	-4.63	2149.7	7.3	0.34
248	2878	1.363H	34.875	2314.	2158.	8.9	0.94	717.0	737.1	-20.1	-2.80	2153.5	4.5	0.21
123	2903	1.336	34.874	2313.	2154.	8.9	0.93	718.4	722.5	-4.1	-0.57	2153.1	0.9	0.04
124	2923	1.338	34.873	2311.	2154.	9.0	0.94	720.6	731.0	-10.4	-1.44	2151.7	2.3	0.11

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	20	-18.2	15.25
DELPCO2/PCO2	20	-2.6	2.15
DELTCO2	20	4.2	3.49
DELTCO2/TCO2	20	0.2	0.16

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TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STA	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	180	59 29.5 N	40 21.1 W	27 8 81	2682

	MEASURED QUANTITIES							*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP ITS110 (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
122	2653	1.259	34.876					717.4	*							

STATION STATISTICS

	P	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	181	59 39.0 N	40 42.2 W	27 8 81	2468

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP IOSTIO (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	5	7.791	34.906	2319.	2093.	2.7	0.54	476.7	491.2	-14.5	-3.03	2087.4	5.6	0.27
103	152	4.153	34.896	2320.	2159.	8.6	1.07	706.8	719.0	-12.2	-1.72	2156.2	2.8	0.13
240	255	4.486H	34.949	2318.	2158.	8.7	1.05	690.2	723.0	-32.8	-4.75	2150.4	7.6	0.35
105	402	3.659	34.867	2309.	2155.	8.7	1.07		743.9					
107	577	3.771	34.895	2318.	2159.	8.9	1.07	707.1	726.4	-19.3	-2.73	2154.6	4.4	0.20
109	703	3.686	34.887	2315.	2160.	8.9	1.07	708.7	743.1	-34.4	-4.86	2152.3	7.7	0.36
241	752	3.603H	34.872	2310.	2153.	8.8	1.07	706.3	731.1	-24.8	-3.51	2147.4	5.6	0.26
111	905	3.696	34.897	2314.	2158.	9.5	1.09	723.6	738.2	-14.6	-2.01	2154.8	3.2	0.15
113	1290	3.535	34.911	2318.	2158.	10.0	1.09	717.2	723.0	-5.8	-0.81	2156.7	1.3	0.06
243	1443	3.515H	34.921	2320.	2156.	10.3	1.08	717.6	706.4	11.2	1.56	2158.6	-2.6	-0.12
115	1659	3.354	34.929	2318.	2160.	10.6	1.07		731.7					
244	1937	2.845H	34.924	2317.	2161.	11.4	1.05	714.8	740.8	-26.0	-3.63	2155.2	5.8	0.27
117	2040	2.732	34.932	2316.	2164.	12.6	1.07	718.1	759.1	-41.0	-5.71	2155.0	9.0	0.41
245	2134	2.144h	34.884	2313.	2159.	9.4	0.99	713.5	745.7	-32.2	-4.51	2151.9	7.1	0.33
119	2266	1.971	34.880	2311.	2155.	9.1	0.98		735.3					
134	2296	1.915A	34.882	2312.	2156.	9.0	0.98		735.8					
246	2360	1.895H	34.882	2313.	2156.	8.8	0.96	711.2	731.6	-20.4	-2.87	2151.4	4.6	0.21
247	2379	1.657H	34.876	2311.	2155.	8.5	0.95	712.3	735.0	-22.7	-3.19	2149.9	5.1	0.24
131	2384	1.723A	34.878	2310.	2157.	8.8	0.97		748.5					
121	2396	1.757	34.878	2314.	2157.	8.9	0.96	711.6	732.2	-20.6	-2.89	2152.4	4.6	0.21
248	2418	1.618H	34.876	2312.	2155.	8.5	0.95	717.3	731.0	-13.7	-1.91	2151.9	3.1	0.14
122	2451	1.684	34.876	2309.	2157.	8.7	0.96		752.6					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	16	-20.2	12.16
DELPCO2/PCO2	16	-2.9	1.70
DELTCO2	16	4.7	2.71
DELTCO2/TCO2	16	0.2	0.13

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TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	183	59 59.8 N	41 20.1 W	28 8 81	1936

	MEASURED QUANTITIES							*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	6	6.063	34.248	2293.	2073.	1.8	0.39	474.2	*	487.7	-13.5	-2.86	* 2067.8	5.2	0.25
240	20	6.180H	34.266	2292.	2071.	1.3	0.43	473.5	*	485.1	-11.6	-2.44	* 2066.6	4.4	0.21
241	108	5.969H	35.035	2317.	2147.	6.6	0.98	636.9	*	680.7	-43.8	-6.88	* 2135.8	11.2	0.52
104	153	5.668	35.033	2324.	2150.	7.7	1.00	654.1	*	667.9	-13.8	-2.11	* 2146.5	3.5	0.16
107	403	4.121	34.941	2316.	2153.	8.6	1.06	689.6	*	709.0	-19.4	-2.81	* 2148.4	4.6	0.21
243	603	3.998H	34.915	2317.	2157.	8.6	1.07	703.7	*	722.1	-18.4	-2.62	* 2152.8	4.2	0.20
110	702	3.832	34.900	2311.	2158.	8.9	1.07	707.5	*	750.7	-43.2	-6.10	* 2148.4	9.6	0.44
113	1000	3.641	34.904	2319.	2160.	9.7	1.08	719.8	*	727.5	-7.7	-1.07	* 2158.3	1.7	0.08
245	1271	3.170H	34.917	2315.	2161.	9.8	1.07	716.3	*	748.5	-32.2	-4.50	* 2153.9	7.1	0.33
116	1457	3.309	34.924	2315.	2157.	10.2	1.06	706.0	*	730.5	-24.5	-3.47	* 2151.4	5.6	0.26
246	1740	2.875H	34.918	2314.	2159.	10.6	1.04	710.1	*	743.2	-33.1	-4.66	* 2151.6	7.4	0.34
119	1750	2.800	34.912	2316.	2157.	10.5	1.03	710.6	*	725.6	-15.0	-2.10	* 2153.6	3.4	0.16
247	1839	2.695H	34.916	2317.	2160.	10.7	1.03	712.0	*	735.1	-23.1	-3.24	* 2154.8	5.2	0.24
122	1868	2.417	34.897	2314.	2159.	10.1	1.01	711.2	*	742.2	-31.0	-4.35	* 2152.1	6.9	0.32
248	1890	2.514H	34.902	2313.	2156.	10.2	1.02	713.9	*	733.0	-19.1	-2.67	* 2151.7	4.3	0.20
123	1913	2.332	34.893	2312.	2155.	9.9	0.99	711.8	*	731.8	-20.0	-2.81	* 2150.5	4.5	0.21
124	1931	2.328	34.894	2313.	2161.	9.8	1.00	709.1	*	756.0	-46.9	-6.62	* 2150.6	10.4	0.48

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	17	-24.5	11.61
DELPCO2/PCO2	17	-3.6	1.62
DELTCO2	17	5.8	2.52
DELTCO2/TCO2	17	0.3	0.12

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	SIN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	186	60 6.6 N	42 12.2 W	28 8 81	242

			MEASURED QUANTITIES							CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
106	7	3.080	31.324	2143.	1947.	0.7	0.23	446.1	*	456.4	-10.3	-2.32	*	1943.2	3.8	0.20
107	8	3.097	32.761	2219.	2006.	0.7	0.25	461.0	*	458.3	2.7	0.58	*	2007.0	-1.0	-0.05
346	9	2.767I	32.933	2234.	2029.	1.1	0.27	474.3	*	487.9	-13.6	-2.87	*	2024.1	4.9	0.24
108	12	1.672	32.991	2234.	2039.	1.4	0.35	510.6	*	518.7	-8.1	-1.59	*	2036.3	2.7	0.13
109	21	1.4 I	33.276	2248.	2078.	3.5	0.57	609.2	*	615.5	-6.3	-1.04	*	2076.3	1.7	0.08
110	21	1.4 I	33.277	2248.	2085.	3.5	0.58	615.2	*	642.5	-27.3	-4.44	*	2078.0	7.0	0.34
347	29	1.411I	33.454	2263.	2082.	2.8	0.50	566.7	*	584.4	-17.7	-3.12	*	2076.8	5.2	0.25
118	53	2.285	33.998			3.5	0.61	581.9	*							
119	79	2.019	34.149	2296.	2124.	5.0	0.74	634.4	*	645.8	-11.4	-1.80	*	2121.0	3.0	0.14
120	111	1.993	34.254	2287.	2119.	5.5	0.79	649.9	*	659.2	-9.3	-1.43	*	2116.7	2.3	0.11
348	150	2.871I	34.457	2289.	2124.	5.9	0.83	648.8	*	676.5	-27.7	-4.27	*	2117.1	6.9	0.32
121	153	2.993	34.478	2292.	2131.	5.8	0.84	647.2	*	695.3	-48.1	-7.43	*	2119.3	11.7	0.55
122	180	3.034	34.501	2307.	2139.	5.9	0.85	652.9	*	673.7	-20.8	-3.19	*	2133.8	5.2	0.24
123	216	3.525	34.607	2301.	2138.	6.2	0.89	655.0	*	693.7	-38.7	-5.91	*	2128.6	9.4	0.44
124	238	3.625	34.632	2297.	2130.	6.4	0.90	656.1	*	675.7	-19.6	-2.99	*	2125.1	4.9	0.23

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	14	-18.3	13.04
DELPCO2/PCO2	14	-3.0	1.98
DELTCO2	14	4.8	3.14
DELTCO2/TCO2	14	0.2	0.15

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	187	60 15.1 N	47 42.0 W	30 8 81	186

			MEASURED QUANTITIES							CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP IN-SITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
113	10	1.221	31.754	2159.	1975.	1.3	0.26	486.1	*	503.6	-17.5	-3.60	*	1969.2	5.8	0.29
115	26	1.564	32.398		2041.	1.5	0.32	501.4	*							
117	51	1.362	33.853	2274.	2107.	4.4	0.67	624.1	*	649.5	-25.4	-4.07	*	2100.5	6.5	0.31
119	73	2.624	34.292	2291.	2116.	5.2	0.77	632.9	*	634.1	-1.2	-0.20	*	2115.7	0.3	0.02
121	103	2.578	34.339		2125.	5.6	0.82	648.0	*							
123	165	3.067	34.469	2300.	2129.	5.9	0.85	648.6	*	657.6	-9.0	-1.39	*	2126.7	2.3	0.11
124	186	3.099	34.480			5.9	0.85	647.5	*							

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	4	-13.3	9.05
DELPCO2/PCO2	4	-2.3	1.59
DELTCO2	4	3.7	2.54
DELTCO2/TCO2	4	0.2	0.12

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	189	60 9.5 N	49 21.0 W	30 8 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
440	10	4.178H	33.381	2215.	2034.	0.6	0.30	466.5	481.6	-15.1	-3.23	2028.4	5.6	0.28
301	11	4.214	33.278	2239.	2029.	1.0	0.31	471.5	480.8	-9.3	-1.97	2025.6	3.4	0.17
304	164	4.881	34.962	2316.	2150.	7.9	1.02	671.5	696.0	-24.5	-3.64	2144.1	5.9	0.28
441	205	4.805H	34.953	2312.	2147.	7.7	1.03	673.6	697.9	-24.3	-3.61	2141.1	5.9	0.27
442	405	4.283H	34.933	2316.	2152.	8.4	1.06	690.1	704.3	-14.2	-2.06	2148.6	3.4	0.16
307	505	4.085	34.923	2314.	2153.	8.7	1.06	693.6	716.0	-22.4	-3.23	2147.8	5.2	0.24
443	604	3.781H	34.888	2308.	2153.	8.5	1.07	704.6	739.9	-35.3	-5.01	2145.1	7.9	0.37
444	702	3.613H	34.873	2312.	2153.	8.5	1.06	712.9	723.4	-10.5	-1.48	2150.6	2.4	0.11
310	824	3.581	34.870	2312.	2155.	8.6	1.06	704.5	732.0	-27.5	-3.91	2148.8	6.2	0.29
445	900	3.647H	34.882	2310.	2153.	8.6	1.07	698.6	731.0	-32.4	-4.63	2145.6	7.4	0.34
446	1046	3.728H	34.909	2313.	2157.	9.3	1.07	722.2	738.2	-16.0	-2.22	2153.4	3.6	0.16
447	1190	3.643H	34.906	2311.	2157.	9.6	1.07	716.5	746.0	-29.5	-4.12	2150.5	6.5	0.30
313	1307	3.590	34.900	2311.	2150.	9.7	1.07	715.7	714.5	1.2	0.17	2150.3	-0.3	-0.01
448	1386	3.534H	34.907	2315.	2159.	9.9	1.07	712.5	739.4	-26.9	-3.78	2153.0	6.0	0.28
240	1633	3.430H	34.914	2316.	2159.	10.0	1.07	710.5	734.8	-24.3	-3.42	2153.5	5.5	0.25
241	1832	3.341H	34.920	2317.	2159.	10.3	1.07	709.8	731.7	-21.9	-3.09	2154.0	5.0	0.23
316	1845	3.333	34.924	2312.	2156.	10.5	1.06	711.0	738.1	-27.1	-3.81	2149.9	6.1	0.28
242	2029	3.163H	34.924	2316.	2157.	10.6	1.09	709.5	726.9	-17.4	-2.45	2153.1	3.9	0.18
319	2218	2.969	34.927	2317.	2157.	11.3	1.05	709.7	722.2	-12.5	-1.76	2154.2	2.8	0.13
243	2227	2.954H	34.925	2317.	2157.	11.1	1.05	707.0	722.2	-15.2	-2.15	2153.5	3.5	0.16
244	2522	2.530H	34.906	2315.	2157.	10.8	1.02	712.8	729.6	-16.8	-2.35	2153.2	3.8	0.18
245	2718	2.340H	34.900	2315.	2156.	10.7	1.01	709.8	725.0	-15.2	-2.15	2152.5	3.5	0.16
322	2766	2.198	34.898	2309.	2156.	10.7	1.00	711.3	749.3	-38.0	-5.34	2147.6	8.4	0.39
246	2823	2.141H	34.894	2313.	2156.	10.6	1.00	712.6	733.0	-20.4	-2.86	2151.4	4.6	0.21
247	2920	1.720H	34.884	2311.	2154.	9.0	0.95	711.8	730.5	-18.7	-2.62	2149.8	4.2	0.20

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	189	60 9.5 N	49 21.0 W	30 8 81	

			MEASURED QUANTITIES						*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
248	2953	1.717H	34.885	2310.	2154.	9.0	0.95	713.2	*	734.9	-21.7	-3.05	*	2149.1	4.9	0.23
323	2955	1.697	34.887	2311.	2154.	9.1	0.95	713.7	*	730.9	-17.2	-2.42	*	2150.1	3.9	0.18
324	2967	1.651	34.885	2307.	2152.	9.0	0.94	712.3	*	737.9	-25.6	-3.59	*	2146.3	5.7	0.27

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	28	-20.7	8.24
DELPCO2/PCO2	28	-3.0	1.14
DELTCO2	28	4.8	1.79
DELTCO2/TCO2	28	0.2	0.08

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STO	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	191	59 39.6 N	50 28.3 W	31 8 81	3419

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	10	6.918	33.944	2271.	2037.	1.7	0.30		439.8					
102	54	4.563	34.580	2292.	2102.	5.3	0.76		585.3					
103	259	3.569	34.848	2307.	2148.	8.3	1.03		719.5					
104	405	3.238	34.815	2292.	2131.	8.5	1.04		703.1					
107	656	3.196	34.819	2308.	2150.	8.7	1.05		724.6					
110	1502	3.472	34.885	2311.	2153.	9.9	1.09		727.7					
112	1904	3.421	34.912	2311.	2157.	10.5	1.07		746.1					
115	2503	3.047	34.931	2315.	2157.	11.8	1.07		730.3					
117	2804	2.794	34.930	2315.	2157.	12.7	1.06		730.8					
120	3154	2.102	34.895	2314.	2162.	11.2	1.00		756.3					
122	3303	1.676	34.886	2309.	2152.	9.0	0.94		729.8					
124	3419	1.494	34.884	2304.	2153.	9.2	0.93		754.5					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

193.

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	EPG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	193	58 39.0 N	52 44.5 W	1 9 81	3518

		MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
570	2	8.408H	34.385			1.2	0.28	447.2						
440	10	8.455H	34.399	2355.	2065.	0.9	0.27	451.6	359.0	92.6	20.51	2110.8	-45.8	-2.22
301	12	8.500	34.417	2291.	2061.	0.6	0.28	451.1	462.8	-11.7	-2.60	2056.2	4.8	0.23
571	20	8.386H	34.387			1.1	0.28	444.6						
572	30	6.580H	34.457			1.4	0.50	498.3						
573	33	5.872H	34.468			2.2	0.56	514.4						
574	36	5.626H	34.483			2.2	0.58	524.6						
575	40	5.481H	34.508			1.6	0.61	530.5						
576	43	5.281H	34.533			1.6	0.64	542.3						
302	45	5.391	34.525	2308.	2104.	1.3	0.64	533.6	545.0	-11.4	-2.14	2100.2	3.8	0.18
577	46	4.953H	34.546			2.8	0.68	558.6						
578	49	4.716H	34.558			4.0	0.72	574.0						
224	50	5.547	34.536	2308.	2103.	2.0	0.65	550.3	542.0	8.3	1.51	2105.7	-2.7	-0.13
579	57	3.599H	34.562			6.5	0.81	617.2						
580	71	3.395H	34.663			7.3	0.90	659.0						
581	91	3.384H	34.747			7.7	0.97	693.2						
303	103	3.375	34.752			7.8	1.00	706.8						
441	104	3.432H	34.791	2303.	2146.	8.1	1.02	707.3	725.5	-18.2	-2.57	2141.9	4.1	0.19
442	203	3.576H	34.843	2305.	2147.	8.2	1.02	709.2	723.4	-14.2	-2.00	2143.8	3.2	0.15
304	254	3.460	34.834	2306.	2148.	8.4	1.05	706.8	723.8	-17.0	-2.40	2144.1	3.9	0.18
443	353	3.325H	34.828	2303.	2147.	8.4	1.02	708.3	731.1	-22.8	-3.22	2141.9	5.1	0.24
305	404	3.312	34.825	2310.	2150.	8.4	1.05	703.8	716.6	-12.8	-1.82	2147.1	2.9	0.14
444	501	3.260H	34.821	2306.	2147.	8.6	1.03	710.3	718.8	-8.5	-1.20	2145.1	1.9	0.09
445	699	3.208H	34.820	2309.	2153.	8.6	1.03	710.5	733.4	-22.9	-3.23	2147.9	5.1	0.24
308	705	3.206	34.819	2305.	2145.	8.5	1.04	711.9	714.0	-2.1	-0.30	2144.5	0.5	0.02

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	193	58 39.0 N	52 44.5 W	1 9 81	3518

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
446	900	3.234H	34.825	2306.	2147.	8.7	1.03	712.2	718.8	-6.6	-0.93	2145.5	1.5	0.07
447	1096	3.232H	34.828	2313.	2150.	8.9	1.04	716.7	705.4	11.3	1.57	2152.6	-2.6	-0.12
311	1301	3.373	34.856	2311.	2154.	9.3	1.07	720.4	731.8	-11.4	-1.59	2151.4	2.6	0.12
448	1490	3.472H	34.884	2307.	2151.	10.1	1.07	723.6	734.1	-10.5	-1.45	2148.7	2.3	0.11
140	1757	3.422H	34.897	2311.	2154.	10.3	1.07	718.6	732.0	-13.4	-1.86	2151.0	3.0	0.14
314	1983	3.418	34.919	2314.	2152.	10.8	1.08	717.8	712.1	5.7	0.79	2153.3	-1.3	-0.06
141	2007	3.401H	34.921	2317.	2155.	10.9	1.07	716.5	713.6	2.9	0.41	2155.7	-0.7	-0.03
142	2354	3.171H	34.929		2154.	11.7	1.07	714.1						
143	2651	2.895H	34.926	2318.	2156.	11.9	1.05	714.9	714.4	0.5	0.06	2156.1	-0.1	0.00
318	2816	2.756	34.925	2316.	2158.	12.4	1.05	716.5	730.8	-14.3	-2.00	2154.8	3.2	0.15
145	3095	2.328H	34.905			12.7	1.02	717.0						
146	3243	1.977H	34.888	2327.	2156.	10.5	0.97	714.1	679.7	34.4	4.82	2164.2	-8.2	-0.38
322	3379	1.630	34.877	2309.	2156.	10.1	0.95	726.8	748.5	-21.7	-2.99	2151.3	4.7	0.22
147	3408	1.586H	34.880	2311.	2153.	9.3	0.93	724.5	725.9	-1.4	-0.19	2152.7	0.3	0.01
323	3460	1.545	34.878		2156.	10.1	0.95	725.2						
148	3486	1.501H	34.880	2317.	2153.	9.5	0.92	724.5	702.6	21.9	3.02	2158.0	-5.0	-0.23
324	3512	1.532	34.878	2309.	2151.	9.8	0.94	723.9	725.0	-1.1	-0.16	2150.7	0.3	0.01

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	26	-1.7	23.14
DELPCO2/PCO2	26	0.0	4.53
DELTCO2	26	-0.5	9.60
DELTCO2/TCO2	26	0.0	0.46

1985

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	194	58 4.5 N	54 19.2 W	1 9 81	3413

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
240	671	3.251H	34.824	2304.	2148.	8.5	1.06		732.0					
241	681	3.253H	34.823	2303.	2147.	8.4	1.05	705.6	730.9	-25.3	-3.59	2141.3	5.7	0.27

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	1	-25.3	640.25
DELPCO2/PCO2	1	-3.6	12.86
DELTCO2	1	5.7	32.48
DELTCO2/TCO2	1	0.3	0.07

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	195	57 38.8 N	55 37.5 W	2 9 81	3085

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	7	8.241	34.174	2278.	2048.	1.4	0.16	436.7	454.6	-17.9	-4.09	2040.5	7.5	0.36
102	44	3.966	34.383	2289.	2102.	3.8	0.64	569.0	590.0	-21.0	-3.69	2095.8	6.2	0.30
103	82	3.061	34.666	2297.	2141.	7.7	0.95	687.6	724.3	-36.7	-5.34	2132.6	8.4	0.39
240	378	3.560H	34.849	2304.	2147.	8.2	1.03	698.5	727.3	-28.8	-4.13	2140.4	6.6	0.31
105	404	3.594	34.850	2305.	2147.	8.2	1.01	698.4	722.7	-24.3	-3.48	2141.4	5.6	0.26
241	675	3.466H	34.850	2304.	2147.	8.5	1.04	705.3	727.0	-21.7	-3.08	2142.1	4.9	0.23
108	756	3.445	34.850	2307.	2149.	8.7	1.03	704.7	724.0	-19.3	-2.74	2144.6	4.4	0.20
242	974	3.332H	34.842	2302.	2146.	8.7	1.05	714.8	730.7	-15.9	-2.22	2142.5	3.5	0.17
110	997	3.323	34.843	2305.	2150.	8.7	1.04	710.2	737.2	-27.0	-3.80	2144.0	6.0	0.28
111	1093	3.251	34.835	2303.	2148.	8.8	1.04	715.0	735.3	-20.3	-2.84	2143.5	4.5	0.21
114	1542	3.450	34.895	2310.	2152.	9.9	1.07	715.2	726.9	-11.7	-1.64	2149.4	2.6	0.12
244	1570	3.443H	34.899	2308.	2152.	10.1	1.07	719.3	734.9	-15.6	-2.17	2148.5	3.5	0.16
116	1947	3.303	34.920	2310.	2154.	10.6	1.06	718.9	737.1	-18.2	-2.53	2149.9	4.1	0.19
118	2349	2.915	34.922	2314.	2156.	11.4	1.04	715.4	730.1	-14.7	-2.05	2152.7	3.3	0.15
120	2748	2.446	34.911	2314.	2157.	12.5	1.03	715.5	734.3	-18.8	-2.63	2152.8	4.2	0.20
122	2966	1.879	34.884	2310.	2153.	10.0	0.96	721.3	730.2	-8.9	-1.23	2151.0	2.0	0.09
124	3086	1.612	34.879	2309.	2152.	10.3	0.95	725.3	730.1	-4.8	-0.67	2150.9	1.1	0.05

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	17	-19.2	7.33
DELPCO2/PCO2	17	-2.8	1.14
DELTCO2	17	4.6	1.88
DELTCO2/TCO2	17	0.2	0.09

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	196	57 13.1 N	56 49.5 W	2 9 81	2586

			MEASURED QUANTITIES						CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
240	232	3.752H	34.835	2307.	2147.	8.3	1.04	698.3	714.8	-16.5	-2.37	2143.2	3.8	0.18
241	579	3.565H	34.850	2324.	2143.	8.3	1.04	693.3	638.0	55.3	7.97	2156.9	-13.9	-0.65
242	777	3.523H	34.851	2314.	2136.	8.4	1.05	699.6	645.2	54.4	7.78	2149.5	-13.5	-0.63

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	3	31.1	33.65
DELPCO2/PCO2	3	4.5	4.83
DELTCO2	3	-7.9	8.26
DELTCO2/TCO2	3	-0.4	0.39

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	197	56 56.1 N	57 34.7 W	3 9 81	1964

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP IN SITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
240	9	7.892H	33.911	2271.	2047.	1.7	0.18	449.5	463.6	-14.1	-3.15	2041.3	5.7	0.28
101	11	7.961	33.900	2270.	2043.	1.8	0.16	445.0	455.4	-10.4	-2.33	2038.8	4.2	0.21
102	20	7.892	33.903	2270.	2043.	1.8	0.16	452.8	455.7	-2.9	-0.63	2041.8	1.2	0.06
103	29	7.849	33.906	2272.	2034.	1.8	0.15	443.1	429.7	13.4	3.02	2039.7	-5.7	-0.28
104	43	3.832	34.091	2277.	2072.	3.2	0.43	509.7	521.9	-12.2	-2.40	2067.8	4.2	0.20
105	54	3.320	34.217	2295.	2089.	4.2	0.59	560.1	528.9	31.2	5.57	2099.1	-10.1	-0.48
106	72	2.870	34.473	2287.	2121.	6.2	0.83	655.6	671.3	-15.7	-2.40	2117.1	3.9	0.18
107	101	2.944	34.616	2305.	2136.	7.2	0.96	696.2	671.7	24.5	3.51	2141.9	-5.9	-0.27
108	153	3.469	34.760	2297.	2142.	7.8	1.00	694.2	731.1	-36.9	-5.32	2133.6	8.4	0.39
241	202	3.638H	34.814	2304.	2141.	8.0	1.02	696.3	699.8	-3.5	-0.51	2140.2	0.8	0.04
109	253	3.722	34.839	2321.	2149.	8.2	1.02	699.0	672.0	27.0	3.87	2155.5	-6.5	-0.30
242	402	3.649H	34.851	2312.	2152.	8.3	1.03	692.8	718.0	-25.2	-3.64	2146.1	5.9	0.27
111	504	3.614	34.853	2308.	2148.	8.4	1.03	695.4	716.0	-20.6	-2.96	2143.2	4.8	0.22
243	604	3.616H	34.858	2309.	2145.	8.5	1.04	700.2	699.6	0.6	0.08	2145.1	-0.1	-0.01
113	703	3.557	34.855	2312.	2147.	8.6	1.04	701.6	696.5	5.1	0.73	2148.2	-1.2	-0.06
244	804	3.546H	34.860	2313.	2153.	8.9	1.05	706.5	719.2	-12.7	-1.79	2150.1	2.9	0.13
115	954	3.449	34.858	2306.	2151.	9.1	1.06	714.4	738.3	-23.9	-3.34	2145.7	5.3	0.25
245	1003	3.494H	34.869	2306.	2149.	9.5	1.07	717.5	728.7	-11.2	-1.56	2146.5	2.5	0.12
116	1054	3.446	34.862	2316.	2151.	9.4	1.07	714.7	699.2	15.5	2.17	2154.6	-3.6	-0.17
246	1300	3.477H	34.895	2310.	2155.	10.1	1.07	720.3	740.6	-20.3	-2.82	2150.5	4.5	0.21
118	1305	3.482	34.896	2315.	2156.	10.1	1.08	718.7	725.6	-6.9	-0.96	2154.4	1.6	0.07
120	1532	3.367	34.903	2314.	2160.	10.7	1.07	719.7	747.8	-28.1	-3.90	2153.8	6.2	0.29
247	1695	3.296H	34.915	2314.	2154.	10.8	1.07	718.4	720.9	-2.5	-0.34	2153.4	0.6	0.03
122	1752	3.228	34.919	2322.	2157.	10.8	1.07	718.3	703.1	15.2	2.11	2160.5	-3.5	-0.16
248	1947	3.002H	34.920	2312.	2156.	11.5	1.06	717.5	738.3	-20.8	-2.90	2151.4	4.6	0.21

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	197	56 56.1 N	57 34.7 W	3 9 81	1964

		MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP IN SITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
124	1959	2.892	34.919	2316.	2157.	11.7	1.06	720.1	726.4	-6.3	-0.87	2155.6	1.4	0.07

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	26	-5.5	17.47
DELPCO2/PCO2	26	-0.8	2.69
DELTCO2	26	1.2	4.55
DELTCO2/TCO2	26	0.1	0.21

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TID	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	198	56 44.5 N	58 2.6 W	3 9 81	1419

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	8	4.802	33.198	2237.	2023.	0.6	0.22	443.2	467.8	-24.6	-5.55	2013.4	9.6	0.48
102	19	4.898	33.404	2242.	2021.	0.5	0.20	438.5	454.0	-15.5	-3.53	2014.7	6.3	0.31
103	23	4.150	33.417	2248.	2024.	0.6	0.20	438.4	449.0	-10.6	-2.42	2019.6	4.4	0.22
104	28	3.084	33.422	2250.	2028.	0.9	0.29	449.4	454.9	-5.5	-1.22	2025.8	2.2	0.11
105	38	1.725	33.498	2255.	2086.	4.7	0.66	613.0	626.9	-13.9	-2.26	2082.4	3.6	0.17
106	53	1.5 I	33.493	2257.	2091.	5.7	0.73	647.3	640.2	7.1	1.10	2092.8	-1.8	-0.08
107	72	1.131	33.706	2261.	2099.	5.7	0.73	650.7	661.6	-10.9	-1.68	2096.3	2.7	0.13
108	101	1.257	34.040	2269.	2127.	9.2	0.91	733.7	764.1	-30.4	-4.14	2120.7	6.3	0.30
110	152	3.253	34.619	2299.	2138.	8.0	0.99	708.2	702.7	5.5	0.78	2139.3	-1.3	-0.06
112	223	3.921	34.804	2309.	2146.	8.2	1.12	699.8	703.3	-3.5	-0.50	2145.2	0.8	0.04
114	404	3.888	34.849	2309.	2150.	8.5	1.05	699.6	721.2	-21.6	-3.08	2145.1	4.9	0.23
116	604	3.781	34.852	2309.	2150.	9.0	1.06	712.7	720.8	-8.1	-1.14	2148.2	1.8	0.09
118	902	3.686	34.855	2310.	2149.	8.6	1.05	704.3	712.8	-8.5	-1.21	2147.0	2.0	0.09
120	1104	3.637	34.860	2308.	2142.	8.4	1.05	701.5	690.7	10.8	1.54	2144.5	-2.5	-0.12
122	1302	3.546	34.866	2308.	2152.	9.2	1.07	715.4	734.7	-19.3	-2.70	2147.7	4.3	0.20
124	1417	3.510	34.867	2308.	2147.	9.4	1.07	719.1	711.9	7.2	1.00	2148.6	-1.6	-0.08

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	16	-8.9	11.73
DELPCO2/PCO2	16	-1.6	1.96
DELTCO2	16	2.6	3.28
DELTCO2/TCO2	16	0.1	0.16

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITD	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	199	56 38.2 N	58 24.6 W	3 9 81	402

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
111	32		32.536	2224.	2074.	3.1	0.81							
112	51	-.187	32.731	2235.	2102.	6.4	0.89		766.7					
240	66		32.939	2236.	2094.	6.5	0.82							
113	71		32.934	2233.	2094.	6.9	0.86							
114	100		33.231	2250.	2099.	6.4	0.79							
115	139		33.544	2256.	2114.	8.8	0.86							
241	153		33.664	2261.	2119.	8.9	0.87							
116	171		33.807	2269.	2128.	9.0	0.89							
119	212	2.377	34.343	2282.	2127.	6.7	0.89		714.5					
120	258	2.750	34.532	2293.	2149.	9.9	1.01		777.4					
122	308	3.235	34.644	2295.	2146.	9.5	1.02		755.9					
242	353	3.6898	34.751	2303.	2151.	9.4	1.04		748.3					
123	361	3.651	34.742	2302.	2151.	9.1	1.03		752.0					
124	409	3.702	34.749	2303.	2150.	9.1	1.03		743.6					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TID	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	201	57 15.0 N	50 1.1 W	5 9 81	3611

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	15	9.759	34.378	2288.	2054.	0.8	0.29		451.2					
102	107	3.376	34.666	2301.	2145.	8.4	1.05		727.3					
103	207	3.457	34.784	2301.	2152.	9.1	1.08		762.0					
105	507	3.131	34.792	2303.	2148.	8.7	1.07		735.6					
107	707	3.218	34.813	2300.	2147.	8.6	1.06		743.4					
109	900	3.212	34.818	2303.	2143.	8.8	1.06		712.8					
112	1396	3.477	34.880	2309.	2151.	10.1	1.10		726.4					
114	1795	3.424	34.895	2307.	2152.	10.4	1.10		739.3					
117	2470	3.157	34.931	2313.	2157.	11.8	1.09		738.5					
119	2796	2.919	34.932	2310.	2152.	12.5	1.08		728.4					
122	3453	1.768	34.881	2305.	2153.	9.6	0.98		751.3					
124	3612	1.530	34.878	2304.	2153.	10.1	0.96		754.9					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	202	56 34.2 N	47 59.5 W	5 9 81	3626

			MEASURED QUANTITIES						CALCULATED QUANTITIES						
SAMP	DEPTH (M)	IEEE INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	13	9.739	34.377	2286.	2054.	0.5	0.33	442.9	455.5	-12.6	-2.84	2048.8	5.2	0.25
440	14	9.685H	34.380	2287.	2055.	0.6	0.29	439.1	455.7	-16.6	-3.77	2048.1	6.9	0.34
441	102	3.241H	34.647	2294.	2141.	8.1	1.02	707.5	736.8	-29.3	-4.14	2134.5	6.5	0.30
202	104	3.254	34.648	2297.	2142.	8.0	1.04	714.1	728.9	-14.8	-2.07	2138.7	3.3	0.15
203	204	3.172	34.752	2301.	2146.	8.5	1.07	720.9	733.1	-12.2	-1.69	2143.3	2.7	0.13
443	350	3.195H	34.787	2300.	2146.	8.7	1.06	720.9	738.1	-17.2	-2.38	2142.2	3.8	0.18
204	355	3.201	34.788	2303.	2149.	8.5	1.06	723.5	739.6	-16.1	-2.23	2145.5	3.5	0.16
205	481	3.199	34.801	2304.	2148.	8.5	1.06	719.7	730.8	-11.1	-1.55	2145.5	2.5	0.12
444	501	3.190H	34.800	2303.	2148.	8.8	1.06	719.6	735.4	-15.8	-2.20	2144.5	3.5	0.16
445	697	3.237H	34.816	2302.	2145.	8.8	1.06	717.3	725.6	-8.3	-1.16	2143.1	1.9	0.09
207	706	3.252	34.812	2303.	2148.	8.5	1.06	715.8	735.2	-19.4	-2.71	2143.7	4.3	0.20
208	806	3.227	34.818	2303.	2147.	8.6	1.06	716.5	730.6	-14.1	-1.97	2143.9	3.1	0.15
446	895	3.248H	34.823	2305.	2148.	8.9	1.06	719.1	727.6	-8.5	-1.18	2146.1	1.9	0.09
209	906	3.222	34.819		2148.	8.6	1.06	715.0						
210	1056	3.259	34.829	2302.	2147.	8.9	1.07	718.8	735.1	-16.3	-2.27	2143.4	3.6	0.17
447	1093	3.240H	34.826	2300.	2148.	9.2	1.07	719.9	748.6	-28.7	-3.98	2141.7	6.3	0.29
212	1371	3.377	34.862	2305.	2151.	9.5	1.10	724.0	742.7	-18.7	-2.58	2146.9	4.1	0.19
448	1486	3.479H	34.883	2309.	2154.	10.1	1.09	726.1	740.4	-14.3	-1.97	2150.9	3.1	0.15
214	1683	3.400	34.885	2307.	2151.	9.9	1.10	720.7	734.8	-14.1	-1.96	2147.9	3.1	0.15
140	1776	3.441H	34.900	2316.	2158.	10.7	1.10	720.0	730.8	-10.8	-1.50	2155.6	2.4	0.11
141	1974	3.458H	34.921	2314.	2156.	11.1	1.10	714.6	730.0	-15.4	-2.16	2152.5	3.5	0.16
216	1979	3.442	34.914	2306.	2152.	10.7	1.10	720.9	743.7	-22.8	-3.17	2147.0	5.0	0.23
142	2270	3.345H	34.933	2315.	2159.	11.7	1.09	715.6	740.0	-24.4	-3.41	2153.6	5.4	0.25
218	2339	3.280	34.932	2311.	2156.	11.5	1.10	717.1	742.6	-25.5	-3.55	2150.4	5.6	0.26
143	2567	3.111H	34.938	2315.	2157.	12.7	1.08	714.6	730.9	-16.3	-2.28	2153.3	3.7	0.17

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIC	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	202	56 34.2 N	47 59.5 W	5 9 81	3626

			MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
219	2592	3.138	34.936	2313.	2158.	12.2	1.10	714.4	*	743.7	-29.3	-4.10	*	2151.5	6.5	0.30
144	2861	2.892H	34.937	2312.	2157.	13.3	1.07	718.0	*	743.5	-25.5	-3.55	*	2151.3	5.7	0.26
221	3039	2.729	34.926	2311.	2157.	12.6	1.07	716.8	*	747.2	-30.4	-4.24	*	2150.3	6.7	0.31
145	3168	2.537H	34.917	2314.	2157.	13.4	1.06	718.2	*	734.6	-16.4	-2.28	*	2153.3	3.7	0.17
146	3353	2.171H	34.896	2310.	2155.	12.1	1.01	716.3	*	740.8	-24.5	-3.42	*	2149.6	5.4	0.25
147	3496	1.830H	34.881	2310.	2152.	10.2	0.97	717.1	*	726.3	-9.2	-1.28	*	2149.9	2.1	0.10
223	3523	1.753	34.878	2309.	2154.	10.0	0.97	720.0	*	738.9	-18.9	-2.63	*	2149.8	4.2	0.19
224	3596	1.603	34.882	2307.	2151.	9.2	0.95	719.9	*	733.0	-13.1	-1.82	*	2148.1	2.9	0.14
148	3596	1.579H	34.877	2309.	2151.	10.4	0.98	724.0	*	725.9	-1.9	-0.27	*	2150.6	0.4	0.07

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	33	-17.3	6.78
DELPCO2/PCO2	33	-2.5	0.97
DELTCO2	33	4.0	1.59
DELTCO2/TCO2	33	0.2	0.07

20.

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	203	55 54.0 N	45 58.5 W	6 9 81	3273

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	14	9.041	34.400	2283.	2063.	1.4	0.37	464.9	*	485.9	-21.0	-4.51	*	2054.9	8.1	0.39
102	77	3.612	34.671	2293.	2143.	8.3	1.06	721.1	*	751.0	-29.9	-4.15	*	2136.5	6.5	0.30
103	152	3.308	34.740	2299.	2147.	8.6	1.07	721.3	*	746.0	-24.7	-3.43	*	2141.6	5.4	0.25
104	253	3.216	34.772	2298.	2146.	8.7	1.06	725.4	*	746.0	-20.6	-2.85	*	2141.5	4.5	0.21
105	353	3.079	34.775	2299.	2150.	8.6	1.05	720.7	*	761.2	-40.5	-5.61	*	2141.3	8.7	0.41
108	801	3.267	34.822	2302.	2146.	8.7	1.05	713.2	*	730.4	-17.2	-2.42	*	2142.1	3.9	0.18
111	1292	3.478	34.882	2306.	2154.	10.1	1.09	725.2	*	752.4	-27.2	-3.74	*	2148.1	5.9	0.27
114	1828	3.441	34.917	2308.	2153.	10.9	1.10	718.0	*	740.6	-22.6	-3.15	*	2148.0	5.0	0.23
117	2397	3.171	34.938	2311.	2156.	12.2	1.09	717.8*	*	742.5	-24.7	-3.44	*	2150.5	5.5	0.25
120	2908	2.806	34.941	2313.	2157.	14.1	1.08	718.1	*	739.6	-21.5	-2.99	*	2152.2	4.8	0.22
123	3187	2.559	34.929	2311.	2162.	15.6	1.08	719.9	*	770.9	-51.0	-7.09	*	2151.0	11.0	0.51
124	3238	2.512	34.925	2311.	2155.	16.0	1.08	722.4	*	738.0	-15.6	-2.16	*	2151.5	3.5	0.16

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-26.4	9.08
DELPCO2/PCO2	12	-3.8	1.34
DELTCO2	12	6.1	2.11
DELTCO2/TCO2	12	0.3	0.10

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	204	55 15.0 N	43 53.1 W	7 9 81	3340

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	9	9.713	34.436	2286.	2067.	0.6	0.48		490.6					
102	103	3.545	34.690	2292.	2143.	8.2	1.07		755.6					
104	303	3.390	34.803	2301.	2147.	9.0	1.09		738.7					
106	505	3.474	34.838	2301.	2148.	9.4	1.09		744.5					
108	656	3.490	34.851	2301.	2153.	9.7	1.10		768.8					
111	951	3.522	34.880	2303.	2153.	10.1	1.12		760.6					
113	1205	3.478	34.8910	2304.	2151.	9.9	1.11		747.1					
116	1705	3.447	34.923	2307.	2151.	11.0	1.12		735.6					
119	2484	3.032	34.942		2157.	12.8	1.10							
121	2953	2.791	34.949	2311.	2155.	14.8	1.11		738.8					
123	3230	2.581	34.932	2316.	2161.	16.0	1.10		745.8					
124	3330	2.412	34.920	2312.	2157.	16.0	1.09		743.8					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
6	205	54 35.0 N	41 54.1 W	7 9 81	3636

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP IN-SITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
671	2	9.705H	34.504	2289.	2067.	1.7	0.51	476.9	485.0	-8.1	-1.69	2063.9	3.1	0.15
672	9	9.711H	34.503					467.2						
540	13	9.717H	34.503	2289.	2068.	1.6	0.50	467.9	487.3	-19.4	-4.14	2060.6	7.4	0.36
673	32	9.720H	34.503	2287.	2066.	1.6	0.50	472.5	486.5	-14.0	-2.96	2060.7	5.3	0.26
674	42	7.700H	34.581	2290.	2104.	4.0	0.77	561.2	598.1	-36.9	-6.58	2093.0	11.0	0.52
675	45	7.261H	34.599					584.6						
676	49	6.449H	34.636					626.7						
677	52	5.406H	34.686					680.7						
678	55	4.738H	34.697	2297.	2135.	7.4	1.07	687.0	699.0	-12.0	-1.74	2132.2	2.8	0.13
679	58	4.533H	34.704					693.0						
680	67	4.241H	34.718	2300.	2137.	7.6	1.08	693.0	696.5	-3.5	-0.51	2136.2	0.8	0.04
681	81	4.113H	34.726	2300.	2138.	7.6	1.08	691.6	701.6	-10.0	-1.45	2135.6	2.4	0.11
541	151	4.092H	34.746	2298.	2141.	7.6	1.06	688.1	722.3	-34.2	-4.97	2133.1	7.9	0.37
543	452	3.746H	34.802	2304.	2150.	8.7	1.11	714.3	740.9	-26.6	-3.73	2144.1	5.9	0.27
544	601	3.623H	34.821	2302.	2149.	9.2	1.13	730.0	745.0	-15.0	-2.06	2145.7	3.3	0.15
545	749	3.440H	34.828	2302.	2151.	9.2	1.13	726.6	754.9	-28.3	-3.89	2144.9	6.1	0.28
546	898	3.364H	34.829	2302.	2150.	9.0	1.12	719.9	749.5	-29.6	-4.11	2143.5	6.5	0.30
547	994	3.305H	34.840	2306.	2151.	9.1	1.11	717.6	737.9	-20.3	-2.83	2146.5	4.5	0.21
548	1245	3.560H	34.889	2308.	2157.	10.1	1.15	728.5	759.1	-30.6	-4.20	2150.4	6.6	0.31
140	1734	3.473H	34.918	2307.	2156.	10.8	1.17	708.1	759.4	-51.3	-7.25	2144.7	11.3	0.52
141	1976	3.426H	34.944	2307.	2153.	11.6	1.16	715.5	745.5	-30.0	-4.19	2146.4	6.6	0.31
340	2029	3.391H	34.946	2312.	2158.	11.8	1.15	715.2	748.0	-32.8	-4.59	2150.7	7.3	0.34
143	2467	3.119H	34.951	2309.	2154.	12.8	1.13	716.2	742.2	-26.0	-3.63	2148.2	5.8	0.27
144	2712	2.991H	34.952	2313.	2158.	13.4	1.13	715.8	744.4	-28.6	-3.99	2151.7	6.3	0.29
344	2770	2.981H	34.956	2312.	2159.	13.6	1.12	720.5	753.5	-33.0	-4.59	2151.8	7.2	0.34

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	DEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	205	54 35.0 N	41 54.1 W	7 9 81	3636

	MEASURED QUANTITIES									CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
145	2956	2.886H	34.959	2316.	2163.	14.5	1.13	724.9	*	755.4	-30.5	-4.20	* 2156.4	6.6	0.31
146	3199	2.764H	34.946	2314.	2165.	15.1	1.12	720.8	*	773.1	-52.3	-7.26	* 2153.7	11.3	0.52
147	3443	2.580H	34.932	2317.	2164.	15.8	1.11	721.6	*	755.7	-34.1	-4.73	* 2156.5	7.5	0.35
148	3536	2.186H	34.925	2315.	2165.	15.6	1.10	723.7	*	768.5	-44.8	-6.19	* 2155.3	9.7	0.45

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-27.2	12.42
DELPCO2/PCO2	24	-4.0	1.71
DELTCO2	24	6.4	2.67
DELTCO2/TCO2	24	0.3	0.12

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
6	206	53 54.6 N	39 52.8 W	8 9 81	3383

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	13	10.914	34.457	2280.	2056.	1.0	0.40	439.6	474.9	-35.3	-8.03	2041.7	14.3	0.70
102	54	6.446	34.663	2292.	2132.	6.5	0.93	652.6	703.3	-50.7	-7.76	2119.8	12.2	0.57
103	78	5.567	34.697	2294.	2141.	8.2	1.06	698.0	737.6	-39.6	-5.68	2132.1	8.9	0.41
104	164	4.917	34.781	2299.	2146.	8.3	1.08	694.8	742.4	-47.6	-6.85	2135.3	10.7	0.50
106	379	4.099	34.831	2301.	2155.	9.5	1.14	741.2	778.1	-36.9	-4.98	2147.3	7.7	0.36
107	529	3.757	34.845	2299.	2154.	9.7	1.14	743.7	782.9	-39.2	-5.27	2145.9	8.1	0.38
109	803	3.551	34.856	2300.	2153.	9.7	1.12	733.8	773.7	-39.9	-5.44	2144.6	8.4	0.39
110	1001	3.584	34.882	2302.	2154.	10.0	1.12	732.3	769.6	-37.3	-5.10	2146.1	7.9	0.37
111	1202	3.505	34.889	2301.	2150.	10.1	1.13	726.7	755.2	-28.5	-3.92	2143.8	6.2	0.29
113	1597	3.464	34.915	2303.	2151.	10.7	1.12	718.6	752.1	-33.5	-4.67	2143.7	7.3	0.34
114	1802	3.446	34.937	2304.	2150.	11.3	1.12	717.9	744.1	-26.2	-3.65	2144.2	5.8	0.27
115	2052	3.331	34.948	2308.	2154.	11.9	1.12	716.0	745.7	-29.7	-4.14	2147.4	6.6	0.30
117	2502	3.068	34.954	2309.	2144.	13.0	1.11	718.6	698.2	20.4	2.84	2148.7	-4.7	-0.22
118	2702	3.002	34.959	2308.	2157.	13.5	1.11	721.2	760.3	-39.1	-5.42	2148.5	8.5	0.39
120	3097	2.888	34.958	2311.	2150.	14.8	1.11	723.7	716.7	7.0	0.97	2151.6	-1.6	-0.07
121	3197	2.824	34.953	2313.	2162.	15.1	1.11	724.4	763.3	-38.9	-5.36	2153.6	8.4	0.39
123	3342	2.586	34.941	2313.	2162.	15.8	1.13	722.5	763.7	-41.2	-5.70	2153.1	8.9	0.41

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	17	-31.5	17.70
DELPCO2/PCO2	17	-4.6	2.66
DELTCO2	17	7.3	4.36
DELTCO2/TCO2	17	0.3	0.21

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

FIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	207	53 4.6 N	37 50.5 W	9 9 81	3629

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	7	12.265	34.469	2285.	2038.	0.8	0.21		420.8					
102	78	6.413	34.637	2293.	2126.	6.5	0.93		673.9					
103	153	5.219	34.734	2296.	2151.	10.0	1.16		779.3					
104	202	4.434	34.718	2295.	2140.	9.5	1.12		729.9					
105	352	4.166	34.834	2301.	2154.	9.8	1.16		773.9					
106	504	3.779	34.839	2303.	2150.	9.7	1.14		746.5					
107	703	3.681	34.866	2301.	2154.	9.9	1.13		774.3					
108	903	3.628	34.882	2305.	2152.	10.1	1.13		747.5					
109	1052	3.581	34.887	2303.	2153.	10.2	1.12		761.0					
111	1249	3.493	34.892	2302.	2147.	10.3	1.11		737.3					
113	1824	3.377	34.943	2308.	2157.	11.9	1.12		760.3					
114	1997	3.285	34.948	2310.	2151.	12.2	1.11		723.9					
117	2737	3.054	34.973	2310.	2157.	12.9	1.09		752.4					
119	3191	2.924	34.962	2315.	2156.	14.7	1.10		727.5					
121	3481	2.787	34.948	2313.	2162.	16.1	1.11		763.0					
123	3604	2.692	34.940	2320.	2155.	16.4	1.11		703.4					
124	3630	2.606	34.933	2311.	2160.	16.6	1.11		762.2					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

211.

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
6	208	51 30.6 N	37 52.3 W	9 9 81	3962

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	12	13.212	34.455	2288.	2032.	1.0	0.13	392.4	402.3	-9.9	-2.52	2027.2	4.8	0.24
102	74	12.504	35.530		2111.	4.1	0.63	486.9						
103	153	9.885	35.131	2316.	2132.	6.2	0.86	580.2	626.2	-46.0	-7.92	2118.8	13.2	0.62
104	222	8.739	35.053	2315.	2154.	9.8	1.17	701.1	719.7	-18.6	-2.66	2149.7	4.3	0.20
105	270	7.394	34.860	2300.	2149.	8.7	1.08	683.6	753.9	-70.3	-10.28	2133.2	15.8	0.74
107	504	4.772	34.903	2304.	2157.	11.0	1.21	763.3	777.3	-14.0	-1.83	2154.1	2.9	0.13
109	706	3.924	34.863	2300.	2156.	9.7	1.12	734.3	788.1	-53.8	-7.32	2144.8	11.2	0.52
111	1004	3.648	34.868	2304.	2147.	9.7	1.11	730.5	728.5	2.0	0.27	2147.4	-0.4	-0.02
113	1499	3.516	34.892	2302.	2154.	10.3	1.12	725.7	770.5	-44.8	-6.18	2144.4	9.6	0.44
115	2102	3.394	34.928	2305.	2150.	11.7	1.12	719.7	739.7	-20.0	-2.78	2145.6	4.4	0.21
118	3002	2.877	34.940	2308.	2158.	14.5	1.12	716.9	765.1	-48.2	-6.72	2147.5	10.5	0.48
120	3596	2.558	34.927	2312.	2156.	16.7	1.11	722.7	738.9	-16.2	-2.24	2152.4	3.6	0.17
124	3954	2.387	34.912	2311.	2161.	17.2	1.10	719.5	766.2	-46.7	-6.49	2150.9	10.1	0.47

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-32.2	21.05
DELPCO2/PCO2	12	-4.7	3.02
DELTCO2	12	7.5	4.67
DELTCO2/TCO2	12	0.3	0.22

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	209	50 4.6 N	37 51.8 W	10 9 81	4270

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	10	15.260	34.683	2298.	2032.	1.2	0.11		387.8					
102	151	10.032	35.149		2121.	5.8	0.82							
103	347	6.443	34.869	2303.	2165.	11.8	1.30		822.7					
104	546	4.837	34.900	2300.	2154.	11.2	1.22		780.2					
105	695	4.300	34.903	2304.	2157.	10.4	1.16		776.8					
106	843	4.074	34.908	2304.	2148.	10.2	1.14		733.8					
107	939	3.921	34.897	2302.	2156.	10.2	1.14		780.0					
108	1136	3.704	34.889	2303.	2149.	10.1	1.12		742.1					
110	1536	3.588	34.905	2302.	2151.	10.7	1.13		756.6					
112	2204	3.389	34.932	2305.	2147.	12.1	1.12		726.0					
114	2858	2.960	34.938		2157.	14.4	1.12							
116	3263	2.639	34.927	2306.	2147.	16.6	1.12		722.3					
118	3440	2.487	34.920	2310.	2157.	17.4	1.12		752.5					
120	3613	2.368	34.913	2310.	2153.	17.8	1.11		733.6					
122	4013	2.279	34.906	2307.	2156.	17.3	1.10		759.4					
124	4275	2.167	34.897	2307.	2153.	15.0	1.07		744.3					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

2/3.

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
6	210	48 49.8 N	37 49.5 W	10 9 81	4143

	MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	13	15.069	34.637	2305.		1.3	0.11	372.2						
102	104	11.570	35.309	2323.	2111.	4.1	0.64	500.1	538.0	-37.9	-7.58	2097.6	13.4	0.63
103	205	9.215	35.028	2311.	2136.	6.9	0.92	604.5	657.0	-52.5	-8.69	2121.8	14.2	0.66
104	304	7.641	34.898	2304.	2156.	9.8	1.18	719.6	772.0	-52.4	-7.28	2144.8	11.2	0.52
105	405	6.268	34.844			11.6	1.30	782.1						
106	505	5.384	34.850	2302.	2167.	11.4	1.26	782.8	837.6	-54.8	-7.00	2156.5	10.5	0.48
108	706	4.266	34.884	2301.	2152.	10.7	1.15	744.2	764.5	-20.3	-2.73	2147.7	4.3	0.20
110	1005	3.861	34.887	2301.	2155.	10.0	1.13	732.2	779.4	-47.2	-6.45	2145.1	9.9	0.46
112	1503	3.626	34.899	2299.	2145.	10.4	1.12	728.2	739.9	-11.7	-1.61	2142.4	2.6	0.12
114	2091	3.474	34.925	2306.	2157.	11.5	1.12	719.3	769.1	-48.8	-6.78	2146.5	10.5	0.49
117	2996	2.881	34.932	2304.	2146.	14.2	1.11	717.6	725.7	-8.1	-1.14	2144.2	1.8	0.09
120	3592	2.362	34.909	2309.	2159.	16.8	1.10	719.5	765.6	-46.1	-6.41	2149.0	10.0	0.46
121	3788	2.309	34.906			17.0	1.10	720.3						
122	4069	2.137	34.897	2307.	2159.	15.2	1.07	723.4	772.9	-49.5	-6.85	2148.4	10.6	0.49
123	4114	2.112	34.895	2305.	2151.	14.8	1.06	723.1	743.2	-20.1	-2.78	2146.6	4.4	0.21

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-37.5	16.62
DELPCO2/PCO2	12	-5.4	2.49
DELTCO2	12	8.6	4.03
DELTCO2/TCO2	12	0.4	0.19

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

CTD	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	211	47 39.5 N	37 50.0 W	11 9 81	4559

		MEASURED QUANTITIES							*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP ITS1TU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
201	10	16.428	35.217	2335.	2049.	1.1	0.07	340.1	*	367.3	-27.2	-8.00	2033.1	15.9	0.78
340	15	16.317H	35.173	2322.	2036.	1.1	0.06	349.8	*	363.0	-13.2	-3.77	2028.4	7.6	0.37
202	126	14.645	35.975	2358.	2100.	3.2	0.45	430.3	*	440.7	-10.4	-2.41	2095.3	4.7	0.23
341	205	13.920H	35.857	2352.	2107.	3.7	0.53	447.1	*	467.9	-20.8	-4.65	2098.1	8.9	0.42
203	260	13.425	35.780	2360.	2123.	3.9	0.57	458.9	*	490.0	-31.1	-6.78	2110.3	12.7	0.60
204	321	13.084	35.724	2341.	2108.	4.2	0.60	469.3	*	492.1	-22.8	-4.86	2099.0	9.0	0.43
342	402	12.323H	35.589	2334.	2121.	5.8	0.77	526.1	*	544.6	-18.5	-3.51	2114.7	6.3	0.30
205	501	10.597	35.318	2337.	2158.	8.6	1.07	633.6	*	659.9	-26.3	-4.15	2151.0	7.0	0.32
343	599	8.210H	34.976	2312.	2152.	10.2	1.17	716.1	*	721.3	-5.2	-0.72	2150.8	1.2	0.05
206	700	6.452	34.882	2300.	2163.	11.9	1.31	787.0	*	826.8	-39.8	-5.06	2155.3	7.7	0.36
344	797	5.573H	34.916	2307.	2167.	12.1	1.26	776.2	*	815.0	-38.8	-5.00	2159.4	7.6	0.35
207	895	4.942	34.926	2320.	2173.	11.4	1.23	760.0	*	786.9	-26.9	-3.54	2167.5	5.5	0.26
345	994	4.710H	34.951	2309.	2156.	11.2	1.17	747.6	*	751.7	-4.1	-0.54	2155.1	0.9	0.04
346	1190	4.212H	34.923	2309.	2161.	10.7	1.14	737.2	*	774.6	-37.4	-5.08	2153.1	7.9	0.37
209	1291	3.958	34.904	2314.	2163.	10.3	1.14	731.8	*	762.5	-30.7	-4.19	2156.4	6.6	0.31
347	1388	3.978H	34.927	2301.	2148.	10.7	1.13	730.4	*	746.3	-15.9	-2.18	2144.5	3.5	0.16
348	1583	3.751H	34.901	2305.	2154.	10.6	1.12	730.0	*	757.1	-27.1	-3.72	2148.2	5.8	0.27
211	2089	3.589	34.920	2304.	2149.	11.2	1.13	718.9	*	739.3	-20.4	-2.83	2144.5	4.5	0.21
140	2175	3.567H	34.925	2304.	2155.	11.7	1.12	720.3	*	767.0	-46.7	-6.49	2144.9	10.1	0.47
544	2377	3.493H	34.931	2304.	2148.	12.1	1.12	718.6	*	734.1	-15.5	-2.16	2144.5	3.5	0.16
141	2477	3.435H	34.932	2308.	2150.	12.3	1.11	718.9	*	727.5	-8.6	-1.20	2148.1	1.9	0.09
142	2877	3.217H	34.939	2305.	2153.	13.4	1.11	717.2	*	754.2	-37.0	-5.16	2144.9	8.1	0.38
213	3182	2.988	34.937	2319.	2165.	14.4	1.12	717.1	*	752.4	-35.3	-4.93	2157.2	7.8	0.36
143	3274	2.917H	34.936	2315.	2152.	15.0	1.11	717.2	*	709.4	7.8	1.09	2153.8	-1.8	-0.08
214	3582	2.676	34.924	2309.	2153.	16.9	1.13	715.6	*	738.0	-22.4	-3.14	2148.0	5.0	0.23

24.

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	211	47 39.5 N	37 50.0 W	11 9 81	4559

		MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
144	3667	2.601H	34.923	2310.	2161.	17.9	1.12	717.5	771.2	-53.7	-7.48	2149.4	11.6	0.54
219	3838	2.451	34.914	2322.	2169.	18.9	1.13	718.7	758.2	-39.5	-5.50	2160.3	8.7	0.40
145	3961	2.373H	34.922	2310.	2155.	18.1	1.11	722.9	743.2	-20.3	-2.81	2150.5	4.5	0.21
146	4255	2.262H	34.909	2309.	2164.	17.1	1.08	720.6	790.1	-69.5	-9.64	2149.3	14.7	0.68
222	4292	2.228	34.902	2308.	2155.	16.3	1.08	721.7	750.2	-28.5	-3.95	2148.8	6.2	0.29
147	4399	2.238H	34.900	2312.	2158.	16.5	1.07	721.4	747.6	-26.2	-3.63	2152.2	5.8	0.27
223	4493	2.236	34.900	2319.	2167.	16.1	1.07	723.6	760.6	-37.0	-5.12	2158.9	8.1	0.37
148	4497	2.251H	34.900	2307.	2163.	16.5	1.07	722.7	793.4	-70.7	-9.79	2148.1	14.9	0.69
224	4619	2.248	34.902	2306.	2151.	16.0	1.07	722.7	739.7	-17.0	-2.36	2147.2	3.8	0.17

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	34	-27.6	16.53
DELPCO2/PCO2	34	-4.2	2.35
DELTCO2	34	6.9	3.90
DELTCO2/TCO2	34	0.3	0.18

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	212	51 48.7 N	40 40.0 W	12 9 81	3555

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	12	16.291	34.540	2303.	2020.	1.2	0.12		356.1					
102	52	9.576	34.510	2303.	2096.	2.9	0.57		533.3					
103	153	8.276	34.814	2313.	2132.	6.4	0.89		631.1					
104	304	5.872	34.830	2314.	2171.	11.5	1.28		802.4					
105	453	4.432	34.862	2312.	2165.	10.5	1.18		780.8					
106	604	4.078	34.883	2312.	2158.	10.0	1.15		747.1					
107	704	3.694	34.847	2305.	2160.	9.5	1.12		785.9					
108	885	3.533	34.847	2304.	2154.	9.5	1.13		761.0					
109	1021	3.569	34.866	2309.	2160.	9.8	1.13		768.8					
110	1244	3.519	34.880	2308.	2154.	10.0	1.12		744.3					
112	1720	3.466	34.910	2312.	2160.	10.8	1.12		756.5					
113	2095	3.332	34.929	2317.	2162.	11.7	1.12		745.5					
114	2487	3.034	34.930	2316.	2167.	12.6	1.10		773.8					
116	2865	2.722	34.927	2321.	2163.	14.2	1.10		734.0					
118	3035	2.599	34.925	2318.	2166.	15.4	1.11		760.5					
122	3374	2.347	34.914	2321.	2163.	16.3	1.10		734.0					
123	3481	2.241	34.905	2319.	2165.	15.8	1.09		751.8					
124	3569	2.215	34.904	2319.	2164.	15.7	1.08		746.6					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	214	51 0.0 N	42 57.8 W	13 9 81	4278

		MEASURED QUANTITIES							CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
540	14	16.173H	35.351	2346.	2051.	1.1	0.07	335.7	356.2	-20.5	-6.12	2038.5	12.5	0.61
724	81	14.665	35.959	2366.	2115.	3.4	0.52	436.8	459.8	-23.0	-5.25	2104.9	10.1	0.48
701	157	13.446	35.800	2359.	2112.	3.2	0.53	448.9	465.0	-16.1	-3.59	2105.1	6.9	0.33
541	201	13.205H	35.754	2358.	2113.	3.8	0.57	455.7	469.0	-13.3	-2.91	2107.4	5.6	0.26
702	304	13.338	35.826	2357.	2110.	3.1	0.50	437.5	464.2	-26.7	-6.09	2098.4	11.6	0.55
542	397	12.639H	35.669	2351.	2125.	4.7	0.67	485.8	514.8	-29.0	-5.97	2114.0	11.0	0.52
703	506	11.415	35.472	2343.	2139.	6.3	0.85	552.0	574.9	-22.9	-4.15	2131.7	7.3	0.34
543	591	8.298H	35.069	2327.	2174.	12.0	1.35	756.3	765.3	-9.0	-1.18	2172.1	1.9	0.09
704	706	6.723	34.951			12.4	1.34	787.3						
544	783	5.210H	34.899	2314.	2172.	11.5	1.26	772.8	808.1	-35.3	-4.57	2165.0	7.0	0.32
705	904	4.528	34.887	2313.	2165.	10.7	1.18	750.2	776.6	-26.4	-3.52	2159.5	5.5	0.25
545	975	4.157H	34.886	2313.	2163.	10.1	1.15	735.8	766.6	-30.8	-4.18	2156.4	6.6	0.30
546	1165	3.717H	34.860	2309.	2157.	9.6	1.13	730.8	754.5	-23.7	-3.24	2151.9	5.1	0.24
707	1304	4.051	34.926	2318.	2163.	10.5	1.16	731.7	746.7	-15.0	-2.05	2159.7	3.3	0.15
547	1356	3.922H	34.920	2313.	2156.	10.6	1.15	727.9	734.9	-7.0	-0.96	2154.5	1.5	0.07
708	1499	3.795	34.909	2310.	2158.	10.4	1.15	727.4	756.1	-28.7	-3.95	2151.8	6.2	0.29
548	1540	3.745H	34.912	2311.	2160.	10.6	1.14	728.4	760.9	-32.5	-4.46	2153.0	7.0	0.32
140	1774	3.646H	34.915	2312.	2161.	10.8	1.14	726.5	761.9	-35.4	-4.87	2153.4	7.6	0.35
710	1893	3.612	34.914	2311.	2158.	10.8	1.14	723.8	751.4	-27.6	-3.81	2152.0	6.0	0.28
141	2071	3.533H	34.927	2314.	2160.	11.4	1.14	721.2	748.7	-27.5	-3.81	2154.0	6.0	0.28
711	2244	3.464	34.929	2314.	2158.	11.7	1.13	716.6	739.4	-22.8	-3.18	2152.9	5.1	0.24
242	2349	3.390H	34.928	2312.	2159.	11.7	1.12	717.8	752.7	-34.9	-4.86	2151.3	7.7	0.35
340	2677	3.125H	34.931	2310.	2158.	12.6	1.11	715.8	731.2	-15.4	-2.16	2154.5	3.5	0.16
713	3049	2.877	34.929	2315.	2160.	13.4	1.10	716.4	744.5	-28.1	-3.92	2153.8	6.2	0.29
143	3163	2.708H	34.924	2317.	2165.	14.4	1.10	717.6	760.3	-42.7	-5.95	2155.7	9.3	0.43

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	214	51 0.0 N	42 57.8 W	13 9 81	4278

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
714	3180	2.728	34.924	2317.	2160.	14.1	1.10	717.8	737.0	-19.2	-2.67	2155.7	4.3	0.20
144	3458	2.428H	34.915	2319.	2161.	16.6	1.11	721.2	733.5	-12.3	-1.71	2158.2	2.8	0.13
718	3544	2.371	34.910	2317.	2164.	16.0	1.10	719.8	755.0	-35.2	-4.89	2156.3	7.7	0.36
145	3753	2.231H	34.903	2315.	2164.	15.3	1.09	723.6	763.3	-39.7	-5.49	2155.4	8.6	0.40
721	4038	2.035	34.890	2316.	2162.	13.2	1.05		749.2					
146	4098	2.018H	34.887	2311.	2157.	12.8	1.03	725.8	745.9	-20.1	-2.77	2152.6	4.4	0.20
147	4198	1.884H	34.881	2312.	2162.	11.8	1.01	729.0	765.1	-36.1	-4.95	2154.2	7.8	0.36
722	4236	1.909	34.884	2313.	2161.	11.9	1.02	724.3	755.7	-31.4	-4.33	2154.2	6.8	0.32
148	4244	1.836H	34.878	2312.	2158.	11.5	1.01	729.8	745.7	-15.9	-2.18	2154.5	3.5	0.16
723	4288	1.806	34.877	2315.	2159.	11.3	1.01	727.7	738.5	-10.8	-1.48	2156.6	2.4	0.11

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	33	-24.7	9.17
DELPCO2/PCO2	33	-3.8	1.44
DELTCO2	33	6.3	2.67
DELTCO2/TCO2	33	0.3	0.13

219.

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	216	50 25.0 N	45 42.7 W	15 9 81	3428

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
240	70	8.653H	34.897	2319.	2138.	6.8	0.98	621.4	*	635.9	-14.5	-2.33	* 2134.1	3.9	0.18
241	318	4.534H	34.837	2309.	2165.	10.8	1.23	760.6	*	793.5	-32.9	-4.32	* 2158.3	6.7	0.31
242	962	3.623H	34.881	2311.	2157.	10.0	1.16	726.4	*	746.7	-20.3	-2.79	* 2152.6	4.4	0.21
243	1159	3.579H	34.892	2312.	2157.	10.2	1.16	723.8	*	743.0	-19.2	-2.65	* 2152.8	4.2	0.20
244	1951	3.315H	34.931	2314.	2160.	11.9	1.16	712.7*	*	748.9	-36.2	-5.08	* 2152.0	8.0	0.37
245	2437	2.954H	34.935	2316.	2160.	13.2	1.14	717.1	*	741.1	-24.0	-3.35	* 2154.7	5.3	0.25
246	2940	2.423H	34.915	2319.	2160.	14.8	1.12	722.3	*	728.9	-6.6	-0.91	* 2158.5	1.5	0.07
247	3334	1.985H	34.888		2156.	11.9	1.06	722.6	*						
248	3384	1.963H	34.89 I	2314.	2155.	11.9	1.06	723.7	*	725.2	-2.0	-0.28	* 2154.5	0.5	0.02

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	8	-19.4	11.05
DELPCO2/PCO2	8	-2.7	1.50
DELTCO2	8	4.3	2.33
DELTCO2/TCO2	8	0.2	0.11

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	217	50 6.5 N	47 38.1 W	15 9 81	2707

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	7	11.928	33.996	2273.	2023.	1.2	0.16	405.8	404.7	1.1	0.27	2023.5	-0.5	-0.02
102	104	3.583	34.705	2301.	2137.	7.9	0.97	672.9	692.1	-19.2	-2.85	2132.4	4.6	0.22
103	204	3.432	34.810	2305.	2144.	8.8	1.06	709.3	709.5	-0.2	-0.02	2144.0	0.0	0.00
104	309	3.448	34.831	2309.	2150.	9.1	1.08	718.5	720.8	-2.3	-0.32	2149.5	0.5	0.02
105	405	3.399	34.835	2305.	2146.	8.8	1.08	714.0	718.6	-4.6	-0.65	2145.0	1.0	0.05
106	504	3.393	34.838	2306.	2148.	8.7	1.07	707.0	723.9	-16.9	-2.40	2144.2	3.8	0.18
107	598	3.394	34.842	2303.	2146.	8.6	1.07	704.5	726.8	-22.3	-3.17	2140.9	5.1	0.24
108	690	3.367	34.842	2303.	2149.	8.8	1.08	709.6	740.7	-31.1	-4.38	2142.1	6.9	0.32
109	776	3.326	34.839			8.9	1.08	713.4						
110	851	3.300	34.839	2305.	2151.	9.0	1.08	714.6	742.2	-27.6	-3.87	2144.9	6.1	0.28
117	2161	2.845	34.924	2313.	2157.	12.1	1.07	715.5	738.9	-23.4	-3.28	2151.8	5.2	0.24
124	2704	2.205	34.898	2327.	2168.	12.0	1.04	719.3	731.7	-12.4	-1.72	2165.2	2.8	0.13

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	11	-14.4	10.94
DELPCO2/PCO2	11	-2.0	1.56
DELTCO2	11	3.2	2.48
DELTCO2/TCO2	11	0.2	0.12

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	218	49 45.5 N	48 35.5 W	16 9 81	2132

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
140	5	11.482H	33.886	2273.	2024.	1.0	0.15	399.1	405.7	-6.6	-1.65	2020.9	3.1	0.15
201	12	11.432	33.884	2267.	2023.	1.0	0.13	401.9	414.4	-12.5	-3.10	2017.7	5.8	0.29
202	35	9.857	34.137	2275.	2037.	1.1	0.19	423.6	433.7	-10.1	-2.38	2032.6	4.4	0.22
203	44	7.864	34.160	2281.	2057.	1.6	0.33	458.7	471.0	-12.3	-2.69	2052.1	4.9	0.24
204	53	5.059	34.373	2287.	2097.	3.6	0.63	552.6	578.9	-26.3	-4.75	2089.0	8.0	0.38
205	76	3.908	34.525	2293.	2120.	6.1	0.81	619.3	647.4	-28.1	-4.53	2112.6	7.4	0.35
207	211	3.411	34.789	2308.	2150.	8.4	1.05	704.9	723.9	-19.0	-2.70	2145.7	4.3	0.20
208	320	3.429	34.831	2306.	2147.	8.4	1.06	709.7	719.0	-9.3	-1.31	2144.9	2.1	0.10
142	536	3.419H	34.845	2303.	2149.	8.8	1.06	697.3	740.9	-43.6	-6.26	2139.2	9.8	0.46
210	543	3.423	34.845	2303.	2146.	8.6	1.06	703.1	727.2	-24.1	-3.43	2140.5	5.5	0.25
211	652	3.411	34.851	2307.	2148.	8.8	1.07	709.8	720.3	-10.5	-1.48	2145.6	2.4	0.11
143	735	3.370H	34.848	2308.	2152.	9.2	1.07	710.4	734.0	-23.6	-3.32	2146.7	5.3	0.25
212	750	3.357	34.850	2306.	2152.	9.1	1.07	715.7	742.1	-26.4	-3.69	2146.2	5.8	0.27
214	894	3.415	34.874	2310.	2154.	9.8	1.09	724.1	735.9	-11.8	-1.63	2151.4	2.6	0.12
144	933	3.418H	34.875	2310.	2158.	9.9	1.10	718.9	755.1	-36.2	-5.03	2150.1	7.9	0.37
216	1092	3.401	34.893	2308.	2154.	10.1	1.10	719.8	744.5	-24.7	-3.43	2148.6	5.4	0.25
218	1381	3.290	34.914	2314.	2157.	10.8	1.09	718.4	734.0	-15.6	-2.18	2153.5	3.5	0.16
145	1424	3.292H	34.914	2310.	2154.	10.9	1.10	718.4	736.6	-18.2	-2.54	2149.9	4.1	0.19
220	1676	3.205	34.919	2310.	2158.	11.1	1.09	719.5	755.6	-36.1	-5.02	2150.1	7.9	0.37
146	1718	3.168H	34.922	2310.	2154.	11.4	1.09	715.9	737.5	-21.6	-3.02	2149.2	4.8	0.22
343	1926	2.994H	34.924	2313.	2156.	11.6	1.08		734.4					
222	1984	2.944	34.922	2313.	2156.	11.6	1.07	716.0	734.3	-18.3	-2.56	2151.9	4.1	0.19
147	2012	2.898H	34.920	2309.	2155.	11.7	1.07	715.5	746.1	-30.6	-4.27	2148.2	6.8	0.31
148	2109	2.801H	34.921	2311.	2159.	12.3	1.08	719.1	756.2	-37.1	-5.16	2150.9	8.1	0.38
224	2114	2.795	34.920	2310.	2157.	12.6	1.07	720.4	751.4	-31.0	-4.30	2150.2	6.8	0.31

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	218	49 45.5 N	48 35.5 W	16 9 81	2132

		MEASURED QUANTITIES						*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP IPSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	24	-22.2	9.94
DELPCO2/PCO2	24	-3.4	1.30
DELTCO2	24	5.5	2.01
DELTCO2/TCO2	24	0.3	0.09

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	6	219	49 6.6 N	50 11.0 W	16 9 81	267

			MEASURED QUANTITIES						*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
113	24	8.204	33.637	2255.	2028.	1.3	0.17	433.7	*	447.0	-13.3	-3.06	* 2022.5	5.5	0.27
114	34	5.114	33.610	2260.	2019.	1.7	0.16	409.5	*	415.6	-6.1	-1.48	* 2016.2	2.8	0.14
115	40	4.9 I	33.565	2263.	2078.	2.9	0.16	553.8	*	570.2	-16.4	-2.96	* 2073.1	4.9	0.24
117	60	4.3 I	33.800	2264.	2110.	6.5	0.83	684.8	*	700.1	-15.3	-2.24	* 2106.5	3.5	0.17
119	111	2.6 I	34.100	2271.	2134.	9.4	0.97	758.2	*	792.2	-34.0	-4.49	* 2127.3	6.7	0.32
121	184	2.320	34.469	2293.	2146.	10.3	1.06	760.1	*	761.8	-1.7	-0.23	* 2145.6	0.4	0.02
124	267	3.178	34.700	2301.	2148.	10.2	1.07	731.9	*	742.1	-10.2	-1.39	* 2145.8	2.2	0.10

STATION STATISTICS

	N	MEAN	SIGMA
DELTCO2	7	-13.9	9.53
DELPCO2/PCO2	7	-2.3	1.29
DELTCO2	7	3.7	2.02
DELTCO2/TCO2	7	0.2	0.10

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

EXP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
TTO	7	220	47 30.8 N	49 45.2 W	24 9 81	94

		MEASURED QUANTITIES							*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	5	13.340	31.797	2159.	1971.	0.5	0.18	458.3	*	491.5	-33.2	-7.25	*	1959.4	11.6	0.59
104	20	13.158	31.791	2159.	1966.	0.5	0.18	464.6	*	476.9	-12.3	-2.64	*	1961.7	4.3	0.22
107	34	11.955	31.951	2167.	1983.	0.5	0.20	475.6	*	509.3	-33.7	-7.09	*	1971.7	11.3	0.57
110	41	5.137	32.396	2211.	2049.	0.5	0.37	585.0	*	613.2	-28.2	-4.82	*	2041.5	7.5	0.37
113	50	2.5 I	32.654	2219.	2096.	1.2	0.71	756.1	*	807.2	-51.1	-6.75	*	2086.4	9.6	0.46
116	63	-.512	32.887	2227.	2115.	5.1	0.95	843.7	*	885.0	-41.3	-4.89	*	2108.2	6.8	0.32
119	83	-.713	33.086	2238.	2134.	11.4	1.09	945.3	*	950.7	-5.4	-0.57	*	2133.2	0.8	0.04
122	89	-.717	33.114	2237.	2137.	12.1	1.09	937.7	*	978.5	-40.8	-4.35	*	2131.1	5.9	0.28

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	8	-30.7	14.27
DELPCO2/PCO2	8	-4.8	2.18
DELTCO2	8	7.2	3.42
DELTCO2/TCO2	8	0.4	0.17

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	221	47 10.5 N	44 56.5 W	25 9 81	133

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
101	10	14.472	32.810	2209.	1987.	1.9	0.17	404.5	432.4	-27.9	-6.91	1975.0	12.0	0.61
104	35	14.492	32.821			1.9	0.17	412.8						
107	48	9.790	33.541	2252.	2037.	2.2	0.23	445.4	475.5	-30.1	-6.75	2025.7	11.8	0.58
110	65	4.772	33.912			3.3	0.67	643.3						
113	82	3.959	34.070	2263.	2113.	3.9	0.77	675.4	721.0	-45.6	-6.75	2102.7	10.3	0.49
116	96	3.507	34.125			4.9	0.85	712.4						
119	115	3.393	34.337			9.7	1.09	840.0						
122	129	3.396	34.360	2280.	2165.	10.1	1.11	841.2	931.1	-89.9	-10.68	2149.9	15.1	0.70

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	4	-48.4	24.91
DELPCO2/PCO2	4	-7.8	1.68
DELTCO2	4	12.3	1.72
DELTCO2/TCO2	4	0.6	0.07

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	222	46 58.5 N	43 20.5 W	25 9 81	1027

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	13	12.997	33.209	2226.	1996.	1.6	0.15	398.6	423.8	-25.2	-6.31	1984.7	11.3	0.56
109	52	4.297	34.312	2287.	2116.	5.3	0.72	608.9	648.1	-39.2	-6.43	2105.6	10.4	0.49
113	119	3.283	34.709	2289.	2146.	9.1	1.05	726.6	784.1	-57.5	-7.92	2134.0	12.0	0.56
114	198	3.558	34.812	2304.	2158.	9.5	1.08	731.4	779.0	-47.6	-6.50	2148.0	10.0	0.46
116	401	3.374	34.834	2298.	2150.	9.2	1.07	716.2	766.5	-50.3	-7.02	2139.2	10.8	0.50
119	618	3.308	34.838	2305.	2156.	9.4	1.07	716.3	765.4	-49.1	-6.85	2145.4	10.6	0.49
122	795	3.410	34.863	2299.	2151.	10.3	1.09	727.4	767.5	-40.1	-5.52	2142.4	8.6	0.40
124	1015	3.432	34.881	2325.	2169.	10.8	1.10	735.3	744.3	-9.0	-1.23	2167.0	2.0	0.09

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	8	-39.7	14.71
DELPCO2/PCO2	8	-6.0	1.90
DELTCO2	8	9.5	2.98
DELTCO2/TCO2	8	0.4	0.14

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	223	46 57.1 N	43 11.6 W	25 9 81	3049

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
119	2395	2.956	34.919	2303.	2153.	12.3	1.07		761.4					
120	2594	2.742	34.917	2311.	2160.	12.7	1.06		760.9					
121	2744	2.615	34.915	2301.	2155.	12.8	1.05		779.8					
122	2843	2.583	34.912	2311.	2162.	12.9	1.05		770.0					
123	2935	2.565	34.911	2304.	2156.	12.9	1.05		771.6					
124	2993	2.558	34.911	2309.	2161.	13.0	1.05		774.3					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	224	46 56.2 N	43 4.0 W	25 9 81	3632

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	8	13.449	32.860	2213.	1992.	1.5	0.17	410.9	436.7	-25.8	-6.28	1981.0	11.0	0.55
102	33	13.378	33.296	2234.	1998.	1.8	0.14	400.5*	414.0	-13.5	-3.38	1991.8	6.2	0.31
103	78	4.220	34.264	2275.	2108.	5.6	0.72	614.3	657.3	-43.0	-7.00	2096.8	11.2	0.53
440	80	3.768H	34.378	2283.	2113.	6.2	0.76		651.3					
104	126	3.193	34.549	2285.	2134.	8.2	0.93	688.4	738.8	-50.4	-7.32	2122.7	11.3	0.53
441	150	3.160H	34.662	2289.	2140.	8.7	1.00		753.2					
105	177	3.321	34.727	2295.	2147.	9.2	1.04	734.3	762.4	-28.1	-3.83	2141.0	6.0	0.28
106	226	3.426	34.787	2297.	2148.	9.2	1.05	730.0	760.0	-30.0	-4.11	2141.6	6.4	0.30
107	301	3.448	34.809	2299.	2151.	9.2	1.06	728.7	766.8	-38.1	-5.22	2142.9	8.1	0.38
442	349	3.386H	34.816	2297.	2148.	8.9	1.04		760.1					
108	400	3.473	34.831	2299.	2149.	9.3	1.06	725.7	756.9	-31.2	-4.30	2142.3	6.7	0.31
109	500	3.386	34.829	2298.	2149.	9.1	1.05	716.5	761.0	-44.5	-6.22	2139.4	9.6	0.45
443	548	3.361H	34.834	2298.	2146.	8.8	1.04		747.1					
110	599	3.384	34.835	2298.	2149.	8.9	1.04	715.1	760.9	-45.8	-6.40	2139.1	9.9	0.46
444	745	3.364H	34.840	2299.	2148.	8.9	1.04		752.3					
111	797	3.346	34.838	2300.	2145.	9.0	1.04	713.2	734.2	-21.0	-2.95	2140.3	4.7	0.22
445	942	3.335H	34.842	2298.	2143.	9.1	1.05		733.2					
112	990	3.316	34.838	2299.	2150.	9.2	1.05	718.9	762.0	-43.1	-5.99	2140.7	9.3	0.43
113	1189	3.459	34.876	2299.	2151.	10.1	1.07	728.3	767.7	-39.4	-5.40	2142.6	8.4	0.39
340	1306	3.463H	34.886	2301.	2153.	10.2	1.07		769.1					
114	1396	3.424	34.892	2302.	2152.	10.5	1.07	723.4	760.5	-37.1	-5.12	2144.0	8.0	0.37
115	1597	3.397	34.911	2304.	2152.	10.9	1.07	723.0	752.3	-29.3	-4.05	2145.6	6.4	0.30
341	1699	3.406H	34.907	2305.	2155.	10.7	1.07		762.4					
116	1796	3.385	34.919	2305.	2155.	11.2	1.07	720.8	762.3	-41.5	-5.76	2146.0	9.0	0.42
342	2193	3.171H	34.927	2305.	2152.	11.8	1.07		748.1					

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	DEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	224	46 56.2 N	43 4.0 W	25 9 81	3632

	MEASURED QUANTITIES									CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
118	2238	3.066	34.925	2307.	2155.	11.8	1.06	717.4	*	753.8	-36.4	-5.07	*	2147.0	8.0	0.37
343	2587	2.792H	34.924	2306.	2154.	12.5	1.05		*	753.7						
120	2731	2.761	34.922	2307.	2155.	12.8	1.05	719.8	*	754.4	-34.6	-4.80	*	2147.5	7.5	0.35
344	2880	2.649H	34.919	2306.	2154.	12.7	1.04		*	753.3						
345	3176	2.337H	34.904	2305.	2155.	12.8	1.01		*	761.7						
122	3328	2.179	34.898	2306.	2154.	13.5	1.02	720.9	*	753.0	-32.1	-4.45	*	2147.0	7.0	0.33
346	3374	2.177H	34.899	2304.	2154.	13.4	1.00		*	760.7						
347	3542	2.042H	34.891	2308.	2155.	13.1	1.01		*	746.8						
348	3616	1.911H	34.888	2304.	2152.	12.6	0.97		*	751.5						
124	3625	2.043	34.889	2305.	2156.	13.3	1.01	722.5	*	766.3	-43.8	-6.06	*	2146.6	9.4	0.44

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	20	-35.4	8.92
DELPCO2/PCO2	20	-5.2	1.17
DELTCO2	20	8.2	1.82
DELTCO2/TCO2	20	0.4	0.09

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	225	46 55.1 N	41 48.5 W	26 9 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
301	15	16.830	33.278	2233.	1984.	0.9	0.11	363.8	*	385.3	-21.5	-5.92	*	1973.1	10.9	0.55
302	39	15.806	33.487	2244.	1994.	0.9	0.12	370.7	*	389.3	-18.6	-5.03	*	1984.6	9.4	0.47
304	106	8.400	34.809	2303.	2127.	6.1	0.82	604.7	*	645.2	-40.5	-6.71	*	2116.0	11.0	0.52
305	205	5.705	34.589	2293.	2150.	9.4	1.08	735.1	*	783.9	-48.8	-6.64	*	2139.9	10.1	0.47
306	303	4.412	34.681	2291.	2156.	10.5	1.14	778.0	*	827.3	-49.3	-6.34	*	2146.5	9.5	0.44
307	404	4.935	34.900	2306.	2162.	11.1	1.18	766.1	*	793.1	-27.0	-3.53	*	2156.5	5.5	0.25
308	504	4.623	34.922	2306.	2162.	10.9	1.15	753.8	*	793.5	-39.7	-5.27	*	2153.9	8.1	0.38
309	751	3.766	34.867	2301.	2154.	9.6	1.09	732.7	*	773.4	-40.7	-5.55	*	2145.4	8.6	0.40
310	998	3.711	34.886	2303.	2153.	9.9	1.08	726.4	*	760.6	-34.2	-4.71	*	2145.6	7.4	0.34
311	1244	3.676	34.905	2303.	2155.	10.5	1.09	724.5	*	771.2	-46.7	-6.44	*	2145.0	10.0	0.46
312	1493	3.656	34.927	2305.	2156.	11.1	1.10	723.5	*	767.3	-43.8	-6.05	*	2146.6	9.4	0.44
313	1743	3.534	34.925	2307.	2156.	11.3	1.09	720.5	*	758.7	-38.2	-5.30	*	2147.7	8.3	0.39
314	1987	3.449	34.933	2308.	2156.	11.9	1.09		*	755.0						
315	2236	3.299	34.935	2308.	2157.	12.4	1.09		*	759.8						
316	2486	3.097	34.927	2307.	2156.	12.1	1.07		*	758.6						
317	2738	2.953	34.931	2308.	2155.	13.8	1.07		*	749.9						
318	2991	2.782	34.930	2313.	2161.	16.3	1.10		*	758.4						
319	3242	2.557	34.920	2312.	2158.	16.3	1.08		*	748.4						
320	3494	2.360	34.911	2313.	2160.	18.1	1.09		*	753.6						
321	3743	2.230	34.903	2313.	2161.	18.2	1.08		*	757.8						
322	3985	2.152	34.897	2310.	2159.	16.2	1.05		*	760.0						
323	4118	2.059	34.894	2307.	2159.	12.0	0.98		*	772.2						
324	4212	1.911	34.883	2303.	2158.	12.0	0.98		*	784.4						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	12	-37.4	9.78
DELPCO2/PCO2	12	-5.6	0.89
DELTCO2	12	9.0	1.50
DELTCO2/TCO2	12	0.4	0.08

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	226	46 42.0 N	40 0.0 W	26 9 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
470	3	18.743H	34.656	2299.	2004.	0.8	0.04		335.4					
301	11	18.775	34.657	2295.	2008.	0.7	0.03		347.6					
472	27	19.273H	35.329	2329.	2023.	0.7	0.01		332.7					
478	48	18.1 I	36.136	2373.	2084.	1.1	0.13		383.5					
480	101	16.333H	36.206	2368.	2108.	2.7	0.40		442.2					
481	155	14.616H	35.933	2356.	2118.	4.1	0.61		487.9					
303	331	11.982	35.548	2344.	2151.	7.9	1.00		614.7					
304	430	9.750	35.215	2319.	2165.	10.6	1.22		757.3					
305	518	8.918	35.195	2327.	2179.	12.7	1.37		791.6					
306	646	6.418	34.955	2309.	2169.	12.5	1.31		817.7					
307	746	5.563	34.964	2308.	2167.	11.8	1.24		811.5					
308	845	4.924	34.946	2306.	2163.	11.1	1.19		798.7					
309	995	4.357	34.927	2306.	2155.	10.5	1.13		758.4					
310	1189	4.035	34.916	2304.	2154.	10.4	1.11		761.6					
311	1385	3.901	34.920	2305.	2153.	10.6	1.10		753.5					
312	1637	3.754	34.918	2303.	2150.	10.7	1.10		747.2					
313	1887	3.643	34.922	2306.	2152.	11.0	1.10		744.6					
314	2173	3.569	34.932	2306.	2152.	11.7	1.10		744.6					
315	2486	3.400	34.937	2309.	2153.	12.5	1.10		737.5					
316	2758	3.184	34.936	2308.	2154.	13.1	1.08		745.6					
317	3065	2.996	34.935	2312.	2158.	14.1	1.08		747.9					
318	3362	2.766	34.928	2310.	2156.	15.5	1.08		747.1					
319	3662	2.463	34.917	2315.	2161.	18.7	1.09		749.9					
320	3966	2.351	34.910	2313.	2160.	18.6	1.09		753.2					
321	4015	2.283	34.907	2316.	2158.	18.4	1.07		732.0					

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	226	46 42.0 N	40 0.0 W	26 9 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
322	4166	2.224	34.903	2309.	2157.	17.0	1.06		755.4					
323	4299	2.208	34.908	2315.	2159.	16.2	1.05		739.6					
324	4414	2.158	34.898	2309.	2154.	15.0	1.03		740.9					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	227	44 58.6 N	42 1.6 W	28 9 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
370	5	18.909H	35.704	2344.	2035.	1.5	0.08		336.2					
201	27	18.911	35.720	2347.	2040.	1.2	0.04	314.9	340.0	-25.1	-7.97	2023.6	16.4	0.80
373	41	18.886H	35.722	2349.	2036.	1.4	0.05		331.1					
375	50	18.788H	35.771	2355.	2045.	1.4	0.06		338.2					
377	81	17.192H	36.296	2376.	2095.	2.4	0.32		402.2					
202	95	16.900	36.318	2372.	2100.	2.6	0.35	399.5	419.0	-19.5	-4.89	2090.2	9.8	0.46
203	154	15.341	36.078	2364.	2121.	3.9	0.55	443.0	479.9	-36.9	-8.32	2105.3	15.7	0.74
204	253	13.678	35.824	2349.	2107.	4.2	0.58	460.4	473.8	-13.4	-2.90	2101.5	5.5	0.26
205	350	12.284	35.596	2338.	2150.	7.7	0.96	578.8	630.1	-51.3	-8.85	2135.0	15.0	0.70
206	497	9.607	35.240	2323.	2169.	11.5	1.29	727.0*	760.3	-33.3	-4.58	2161.7	7.3	0.34
207	692	6.404	34.981	2314.	2172.	13.0	1.32	794.2	810.9	-16.7	-2.10	2168.7	3.3	0.15
208	790	5.408	34.956			12.2	1.25	770.7						
209	884	4.895	34.958	2306.	2163.	11.5	1.20	754.9	799.7	-44.8	-5.94	2153.9	9.1	0.42
210	994	4.480	34.945	2314.	2160.	11.0	1.16	742.4	749.5	-7.1	-0.96	2158.5	1.5	0.07
211	1096	4.287	34.946	2307.	2157.	10.9	1.15	737.3	764.2	-26.9	-3.65	2151.3	5.7	0.27
212	1291	4.032	34.934	2310.	2156.	10.7	1.14	717.7	746.9	-29.2	-4.07	2149.6	6.4	0.30
213	1485	3.832	34.922	2308.	2159.	10.7	1.13	728.7	769.7	-41.0	-5.62	2150.2	8.8	0.41
214	1668	3.702	34.919	2311.	2156.	10.8	1.13	722.4	742.4	-20.0	-2.77	2151.6	4.4	0.20
215	1863	3.642	34.928			11.2	1.12	720.3						
216	2580	3.283	34.945	2308.	2153.	13.7	1.13	715.9	741.9	-26.0	-3.63	2147.2	5.8	0.27
217	3069	2.903	34.937	2313.	2159.	16.3	1.13	717.0	749.6	-32.6	-4.55	2151.8	7.2	0.33
218	3352	2.687	34.928	2320.	2156.	18.4	1.14	717.4	708.4	9.0	1.26	2158.1	-2.1	-0.10
219	3824	2.496	34.922	2313.	2161.	20.5	1.16	720.0	759.6	-39.6	-5.50	2152.4	8.6	0.40
220	3920	2.339	34.909	2318.	2163.	22.8	1.18	723.3	748.3	-25.0	-3.46	2157.5	5.5	0.25
221	4197	2.296	34.9059	2318.	2164.	24.0	1.19	723.5	753.3	-29.8	-4.11	2157.5	6.5	0.30

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	227	44 58.6 N	42 1.6 W	28 9 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
222	4453	2.279	34.903	2319.	2162.	23.9	1.19	724.3	739.5	-15.2	-2.09	2158.6	3.4	0.16
223	4549	2.283	34.902	2318.	2164.	23.6	1.17	729.9	752.6	-22.7	-3.11	2159.0	5.0	0.23
224	4690	2.256	34.903	2315.	2158.	19.3	1.11	724.4	736.1	-11.7	-1.61	2155.4	2.6	0.12

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-25.4	13.27
DELPCO2/PCO2	22	-4.1	2.35
DELTCO2	22	6.9	4.38
DELTCO2/TCO2	22	0.3	0.21

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	228	42 1.0 N	41 59.5 W	29 9 81	4917

		MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
301	11	21.240	36.061	2365.	2035.	1.1	0.02	289.3	*	313.3	-24.0	-8.29	2017.4	17.6	0.86
240	12	21.2 I	36.070	2368.	2039.	1.1	0.02	292.0	*	315.7	-23.7	-8.13	2021.8	17.2	0.84
302	55	19.356	36.256	2377.	2064.	1.1	0.03	326.3	*	344.5	-18.2	-5.57	2052.3	11.7	0.57
241	84	18.8 I	36.471	2386.	2092.	2.0	0.18	360.7	*	382.2	-21.5	-5.96	2079.7	12.3	0.59
303	152	17.393	36.4 I	2386.	2097.	2.0	0.21	357.3	*	390.7	-33.4	-9.36	2078.1	18.9	0.90
242	185	17.2 I	36.4 I	2386.	2098.	2.2	0.25	365.1	*	392.8	-27.7	-7.58	2082.6	15.4	0.73
304	251	16.787	36.355	2378.	2095.	2.3	0.30	376.2	*	399.3	-23.1	-6.14	2082.6	12.4	0.59
305	302	16.103	36.217	2372.	2109.	2.8	0.40	404.3	*	437.2	-32.9	-8.14	2093.1	15.9	0.75
243	379	15.1 I	36.019	2365.	2107.	3.4	0.47	427.5	*	444.0	-16.5	-3.85	2099.5	7.5	0.36
306	499	13.433	35.770	2349.	2122.	5.0	0.68	487.7	*	512.6	-24.9	-5.10	2112.6	9.4	0.44
307	597	11.998	35.558	2340.	2156.	8.0	1.01	597.4	*	645.8	-48.4	-8.10	2142.4	13.6	0.63
244	679	10.4 I	35.425	2332.	2158.	8.8	1.06	640.3	*	679.3	-39.0	-6.08	2147.9	10.1	0.47
308	795	8.030	35.113	2322.	2182.	14.2	1.45	810.9	*	829.6	-18.7	-2.30	2178.4	3.6	0.16
245	829	7.847H	35.117	2315.	2194.	13.9	1.41	791.4	*	934.9	-143.5	-18.13	2168.3	25.7	1.17
309	895	6.583	35.025	2315.	2178.	13.3	1.34	791.1	*	839.1	-48.0	-6.07	2168.8	9.2	0.42
310	938	6.090	35.017	2314.	2174.	12.9	1.30	777.5	*	821.7	-44.2	-5.68	2165.3	8.7	0.40
246	975	6.077H	35.040	2317.	2175.	12.8	1.30	776.6	*	813.5	-36.9	-4.76	2167.7	7.3	0.34
311	1081	5.345	35.019	2317.	2169.	12.0	1.22	756.3	*	781.6	-25.3	-3.35	2163.7	5.3	0.24
247	1174	4.837H	34.983	2310.	2164.	11.5I	1.2 I	744.5	*						
312	1267	4.553	34.961	2313.	2163.	11.0	1.16	737.2	*	767.8	-30.6	-4.15	2156.5	6.5	0.30
248	1421	4.245H	34.952	2310.	2161.	10.9	1.15	733.5	*	771.1	-37.6	-5.12	2153.0	8.0	0.37
313	1461	4.114	34.938	2307.	2158.	10.7	1.13	734.7	*	768.9	-34.2	-4.66	2150.7	7.3	0.34
314	1567	4.001	34.936	2305.	2155.	10.7	1.13	725.6	*	763.1	-37.5	-5.16	2146.9	8.1	0.37
440	1750	3.993H	34.967	2314.	2156.	11.5	1.14		*	731.3					
315	1817	4.043	34.982	2314.	2161.	11.9	1.14	723.7	*	754.7	-31.0	-4.28	2154.7	6.8	0.31

* DELTA PCO2 > 0.5 %

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	228	42 1.0 N	41 59.5 W	29 9 81	4917

			MEASURED QUANTITIES						*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
441	2046	3.696H	34.941	2310.	2156.	11.8	1.13		*	747.3					
316	2164	3.677	34.950	2310.	2156.	12.4	1.13	710.2	*	747.3	-37.1	-5.23	2147.8	8.2	0.38
442	2444	3.514H	34.949	2312.	2159.	13.2	1.13		*	753.2					
317	2499	3.486	34.954	2311.	2157.	13.7	1.13	702.8	*	748.5	-45.7	-6.50	2146.8	10.2	0.47
443	2748	3.314H	34.947	2314.	2159.	14.3	1.13		*	745.1					
318	2791	3.236	34.950	2311.	2154.	14.7	1.13	715.7	*	734.4	-18.7	-2.61	2149.8	4.2	0.19
444	3046	3.049H	34.939	2313.	2157.	15.7	1.13		*	740.3					
319	3095	3.009	34.946	2316.	2161.	17.0	1.14	714.4	*	746.1	-31.7	-4.44	2153.9	7.1	0.33
320	3301	2.870	34.943	2321.	2162.	18.8	1.16	713.7	*	731.4	-17.7	-2.48	2158.0	4.0	0.19
445	3541	2.673H	34.925	2320.	2165.	20.6	1.17		*	748.8					
321	3689	2.587	34.924	2320.	2167.	22.2	1.18	714.1	*	759.0	-44.9	-6.28	2157.1	9.9	0.46
446	4025	2.393H	34.911	2319.	2164.	22.3	1.17		*	748.6					
322	4383	2.332	34.913	2325.	2167.	25.5	1.19	724.8	*	738.6	-13.8	-1.90	2163.9	3.1	0.14
447	4421	2.325H	34.902	2323.	2168.	24.8	1.19		*	750.9					
323	4626	2.325	34.902	2324.	2170.	25.1	1.18	722.7	*	756.1	-33.4	-4.62	2162.7	7.3	0.34
448	4846	2.309H	34.901	2322.	2167.	23.4	1.16		*	749.5					
324	4863	2.310	34.901	2320.	2165.	23.7	1.16	729.6	*	748.5	-18.9	-2.59	2160.9	4.1	0.19

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	32	-33.8	21.97
DELPCO2/PCO2	32	-5.7	2.92
DELTCO2	32	9.9	5.04
DELTCO2/TCO2	32	0.5	0.24

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	229	38 59.7 N	44 0.0 W	1 10 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
301	11	22.526	36.256	2376.	2034.	1.4	0.01	289.3	*	301.4	-12.1	-4.17	* 2024.9	9.1	0.45
302	55	21.693	36.263D			1.2	0.02	300.5	*						
440	98	18.612H	36.533	2388.	2095.	2.0	0.17	357.0	*	385.2	-28.2	-7.90	* 2078.8	16.2	0.77
303	152	17.856	36.501D			2.0	0.20	349.3	*						
304	199	17.575	36.470	2384.	2091.	2.0	0.21	356.3	*	383.5	-27.2	-7.63	* 2075.4	15.6	0.75
441	247	17.324H	36.415	2386.	2092.	2.5	0.25	365.2	*	381.8	-16.6	-4.54	* 2082.6	9.4	0.45
305	296	17.027	36.383	2382.	2093.	2.1	0.26	369.4	*	389.5	-20.1	-5.45	* 2081.8	11.2	0.53
307	398	15.882	36.166	2371.	2114.	3.2	0.48	420.3	*	450.0	-29.7	-7.07	* 2100.3	13.7	0.65
442	495	14.430H	35.923	2357.	2123.	4.8	0.62	466.2	*	498.9	-32.7	-7.01	* 2110.0	13.0	0.61
443	693	11.775H	35.530	2337.	2149.	9.0	0.99	595.2	*	628.8	-33.6	-5.64	* 2139.4	9.6	0.45
309	797	9.461	35.236	2325.	2178.	12.4	1.36	748.4	*	796.3	-47.9	-6.40	* 2168.1	9.9	0.46
444	842	8.623H	35.143			13.5	1.39	779.9	*						
445	992	6.432H	35.051	2322.	2173.	13.0	1.29	775.4	*	780.8	-5.4	-0.69	* 2171.9	1.1	0.05
311	1101	5.817	35.061	2319.	2173.	12.3	1.25	754.0	*	793.9	-39.9	-5.29	* 2164.8	8.2	0.38
446	1189	5.620H	35.108	2322.	2171.	12.2	1.20	736.0	*	771.3	-35.3	-4.80	* 2163.4	7.6	0.35
447	1386	4.898H	35.055	2318.	2162.	11.8	1.16	726.4	*	744.5	-18.1	-2.49	* 2158.0	4.0	0.18
313	1541	4.649	35.036	2317.	2165.	11.6	1.17	724.0	*	762.0	-38.0	-5.25	* 2156.7	8.3	0.38
448	1682	4.140H	34.979	2311.	2161.	11.7	1.14	721.4	*	767.4	-46.0	-6.38	* 2151.1	9.9	0.46
240	2073	3.857H	34.976	2313.	2159.	13.3	1.14	709.3*	*	749.3	-40.0	-5.64	* 2150.1	8.9	0.41
315	2121	3.774	34.969	2313.	2160.	13.1	1.15	713.7	*	754.6	-40.9	-5.73	* 2151.0	9.0	0.42
241	2321	3.602H	34.967	2314.	2160.	14.6	1.14	710.2	*	750.1	-39.9	-5.62	* 2151.1	8.9	0.41
242	2570	3.374H	34.958	2312.	2156.	15.9	1.15	711.7	*	740.2	-28.5	-4.00	* 2149.6	6.4	0.30
317	2740	3.190	34.9530	2321.	2163.	17.1	1.17	712.4	*	735.7	-23.3	-3.26	* 2157.8	5.2	0.24
243	3064	2.936H	34.942	2318.	2163.	19.3	1.17	714.5	*	747.8	-33.3	-4.66	* 2155.6	7.4	0.34
244	3559	2.540H	34.919	2324.	2166.	24.6	1.21	717.1	*	738.1	-21.0	-2.92	* 2161.3	4.7	0.22

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	229	38 59.7 N	44 0.0 W	J 10 81	

		MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
319	3717	2.148	34.914	2324.	2167.	25.5	1.22	718.5	*	742.4	-23.9	-3.33	*	2161.7	5.3	0.25
245	4056	2.325H	34.904	2326.	2172.	27.8	1.23	725.2	*	757.9	-32.7	-4.51	*	2164.8	7.2	0.33
246	4554	2.300H	34.897	2328.	2174.	30.2	1.25	732.1	*	759.1	-27.0	-3.68	*	2168.1	5.9	0.27
321	4575	2.298	34.898	2331.	2175.	29.8	1.26	731.0	*	751.8	-20.8	-2.85	*	2170.4	4.6	0.21
247	4753	2.312H	34.897	2331.	2175.	30.3	1.25	729.4	*	751.3	-21.9	-3.01	*	2170.2	4.8	0.22
323	4871	2.309	34.896	2329.	2175.	29.4	1.25	732.1	*	760.0	-27.9	-3.81	*	2168.9	6.1	0.28
248	4900	2.312H	34.897	2328.	2174.	29.7	1.24	733.6	*	758.9	-25.3	-3.45	*	2168.5	5.5	0.25

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	29	-28.9	9.82
DELPCO2/PCO2	29	-4.7	1.65
DELTCO2	29	8.2	3.41
DELTCO2/TCO2	29	0.4	0.16

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	230	37 37.2 N	45 27.5 W	2 10 81	5236

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
301	3	22.952	36.312	2381.	2043.	1.2	0.01	285.1	*	308.6	-23.5	-8.23	*	2025.3	17.7	0.86
302	64	19.659	36.373	2384.	2058.	1.2	0.01	311.9	*	327.3	-15.4	-4.93	*	2047.4	10.6	0.51
303	86	18.218	36.479	2387.	2089.	1.8	0.08	342.0	*	375.2	-33.2	-9.69	*	2069.2	19.8	0.95
304	139	17.687	36.493	2387.	2085.	2.0	0.19	349.3	*	368.3	-19.0	-5.45	*	2073.6	11.4	0.54
305	223	17.074	36.394	2384.	2099.	2.2	0.25	363.6	*	397.9	-34.3	-9.42	*	2080.1	18.9	0.90
306	302	16.351	36.258	2375.	2098.	2.6	0.32	386.7	*	409.4	-22.7	-5.86	*	2086.2	11.8	0.56
307	391	15.333	36.077	2367.	2117.	3.4	0.47	423.1	*	464.0	-40.9	-9.66	*	2098.7	18.3	0.87
308	541	13.349	35.758			5.6	0.74	509.2	*							
309	649	11.579	35.514	2337.	2162.	8.5	1.04	612.6	*	678.9	-66.3	-10.82	*	2144.3	17.7	0.82
310	704	10.908	35.421	2335.	2171.	9.8	1.14	659.6	*	723.1	-63.5	-9.63	*	2155.6	15.4	0.71
311	795	9.397	35.278	2329.	2182.	11.9	1.31	734.4	*	799.3	-64.9	-8.83	*	2168.3	13.7	0.63
312	852	8.313	35.182	2325.	2181.	13.2	1.37	773.7	*	811.0	-37.3	-4.82	*	2173.5	7.5	0.34
313	970	7.224	35.186			13.4	1.33	764.9	*							
314	1179	6.522	35.275	2337.	2179.	12.8	1.21	719.7	*	749.5	-29.8	-4.14	*	2172.3	6.7	0.31
315	1331	4.820	35.024	2331.	2173.	12.1	1.18	732.0	*	741.7	-9.7	-1.33	*	2170.8	2.2	0.10
316	1463	4.720	35.042	2320.	2165.	12.1	1.16	722.0	*	749.9	-27.9	-3.86	*	2158.9	6.1	0.28
318	1733	4.063	34.971	2313.	2160.	12.0	1.13	718.8	*	754.2	-35.4	-4.93	*	2152.2	7.8	0.36
319	1921	3.875	34.962	2310.	2158.	12.3	1.13	708.1	*	757.0	-48.9	-6.91	*	2147.2	10.8	0.50
320	2133	3.788	34.972	2310.	2163.	13.7	1.15	713.0	*	755.7	-42.7	-5.99	*	2153.6	9.4	0.44
321	2357	3.591	34.967	2321.	2160.	15.0	1.15	706.3	*	722.1	-15.8	-2.23	*	2156.4	3.6	0.17
322	2574	3.389	34.963	2317.	2161.	16.0	1.15	709.8	*	742.3	-32.5	-4.57	*	2153.7	7.3	0.34
323	2790	3.232	34.953	2323.	2164.	19.3	1.19	711.3	*	733.1	-21.8	-3.06	*	2159.1	4.9	0.23
324	2977	3.066	34.950	2324.	2168.	21.2	1.21	715.4	*	747.3	-31.9	-4.46	*	2160.9	7.1	0.33
325	3070	2.977	34.946	2326.	2166.	21.9	1.21	716.7	*	729.9	-13.2	-1.83	*	2163.0	3.0	0.14
326	3164	2.897	34.938	2324.	2169.	22.1	1.21	715.1	*	751.7	-36.6	-5.12	*	2160.9	8.1	0.38

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	230	37 37.2 N	45 22.5 W	2 10 81	5236

			MEASURED QUANTITIES						*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
327	3370	2.770	34.930	2328.	2166.	23.3	1.22	714.7	*	722.5	-7.8	-1.09	*	2164.2	1.8	0.08
328	3637	2.563	34.917	2324.	2167.	24.6	1.21	715.5	*	742.6	-27.1	-3.79	*	2160.9	6.1	0.28
329	3876	2.425	34.907	2331.	2171.	27.2	1.23	722.0	*	733.3	-11.3	-1.57	*	2168.5	2.5	0.12
145	3990	2.366I	34.904	2339.	2175.	28.21	1.24I		*	719.5						
330	4077	2.359	34.902	2328.	2173.	28.9	1.24	723.3	*	754.6	-31.3	-4.32	*	2166.1	6.9	0.32
331	4314	2.306	34.898	2335.	2177.	31.2	1.26		*	744.9						
332	4438	2.294	34.895	2334.	2179.	32.3	1.28	731.8	*	758.1	-26.3	-3.60	*	2173.2	5.8	0.26
333	4583	2.291	34.892	2340.	2179.	32.8	1.28		*	734.4						
334	4819	2.298	34.890	2335.	2182.	33.9	1.29	750.7S	*	769.0	-18.3	-2.44	*	2178.1	3.9	0.18
335	5009	2.310	34.889	2345.	2180.	33.9	1.29		*	719.1						
336	5227	2.316	34.886	2334.	2183.	34.9	1.31	736.6	*	777.9	-41.3	-5.61	*	2174.2	8.8	0.41

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	30	-31.0	15.24
DELPCO2/PCO2	30	-5.3	2.72
DELTCO2	30	9.2	5.26
DELTCO2/TCO2	30	0.4	0.25

S SINGLE ANALYSIS

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	231	35 59.5 N	47 0.6 W	3 10 81	5012

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
540	9	23.322H	36.307	2381.	2040.	1.1	0.01	283.4	304.5	-21.1	-7.43	2024.0	16.0	0.79
201	15	23.204	36.322		2040.	1.0	0.01							
202	75	17.544	36.307	2386.	2075.	1.2	0.01	334.4	350.8	-16.4	-4.90	2064.7	10.3	0.50
541	125	16.775H	36.335	2376.	2095.	2.2	0.25		402.3					
203	150	16.500	36.300	2385.	2106.	2.2	0.29	382.4	409.0	-26.6	-6.94	2092.1	13.9	0.66
440	247	15.387H	36.093	2367.	2114.	3.4	0.43		456.6					
204	325	14.772	35.997	2364.	2114.	3.6	0.52	437.1	461.9	-24.8	-5.67	2103.1	10.9	0.51
441	397	13.705H	35.817	2349.	2138.	5.2	0.68		559.8					
205	473	12.485	35.647D	2347.	2147.	6.5	0.85	553.9	592.5	-38.6	-6.98	2134.8	12.2	0.57
442	547	11.459H	35.497	2336.	2157.	8.8	1.05		662.5					
206	672	9.012	35.220	2330.	2182.	12.71	1.3 1	768.7						
443	695	8.803H	35.209	2337.	2189.	13.4	1.37		797.9					
207	772	7.418	35.140			13.1	1.34	776.7						
444	843	7.351H	35.232	2325.	2179.	13.0	1.29		800.8					
208	922	7.251	35.324D	2340.	2179.	12.6	1.24	727.0	738.8	-11.8	-1.63	2176.3	2.7	0.12
445	996	6.939H	35.307	2331.	2182.	12.6	1.21		789.7					
209	1082	6.161	35.231			12.5	1.20	726.4						
446	1191	5.351H	35.125	2326.	2172.	12.5	1.18		759.3					
210	1345	4.709	35.051	2327.	2174.	12.0	1.16	724.4	762.8	-38.4	-5.30	2165.6	8.4	0.39
140	1504	4.233H	35.004	2314.	2152.	12.1	1.14		714.1					
211	1644	4.119	35.001			12.6	1.15	718.1						
141	1800	3.902H	34.985	2318.	2162.	13.0	1.14		743.0					
212	1942	3.755	34.979	2314.	2158.	13.9	1.16	715.3	741.2	-25.9	-3.63	2152.2	5.8	0.27
213	1942	3.754	34.979			13.9	1.16	713.8						
142	2093	3.596H	34.974	2315.	2155.	15.2	1.16		723.4					

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
TYP	7	231	35 59.5 N	47 0.6 W	3 10 81	5012

			MEASURED QUANTITIES						*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
214	2241	3.525	34.977	2320.	2164.	16.6	1.18	713.6	*	744.9	-31.3	-4.39	2157.0	7.0	0.32
215	2392	3.359	34.967			17.6	1.19	709.1*	*						
447	2476	3.234H	34.959	2322.	2170.	18.4	1.18		*	764.3					
143	2583	3.148H	34.953	2323.	2166.	19.0	1.18		*	741.6					
216	2789	3.021	34.949			21.9	1.22	717.0	*						
144	3074	2.736H	34.930	2324.	2169.	23.9	1.21		*	752.1					
218	3281	2.621	34.925	2327.	2168.	24.4	1.22	716.0	*	735.1	-19.1	-2.66	2163.7	4.3	0.20
448	3462	2.422H	34.911	2327.	2174.	27.8	1.23		*	763.6					
220	3657	2.404	34.908	2342.	2179.	28.2	1.25	725.0	*	725.5	-0.5	-0.06	2178.9	0.1	0.00
146	4060	2.260H	34.896	2328.	2178.	31.8	1.25		*	779.0					
222	4232	2.257	34.895	2333.	2181.	33.0	1.29	735.0	*	772.0	-37.0	-5.04	2173.0	8.0	0.37
147	4454	2.243H	34.888	2349.	2198.	35.5	1.29		*	786.4					
223	4656	2.250	34.887	2335.	2182.	35.1	1.32		*	769.0					
148	4844	2.271H	34.883	2332.	2185.	36.1	1.30		*	796.7					
224	4967	2.275	34.886	2336.	2185.	35.8	1.33	746.3	*	779.3	-33.0	-4.43	2178.0	7.0	0.32

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	13	-25.0	10.81
DELPCO2/PCO2	13	-4.5	2.06
DELTCO2	13	8.2	4.32
DELTCO2/TCO2	13	0.4	0.21

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	233	33 55.2 N	49 35.3 W	4 10 81	5202

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP (ITS-IU) (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	6	23.997	36.606	2392.	2040.	2.4	0.01	279.8	*	295.1	-15.3	-5.46	*	2028.0	12.0	0.59
102	56	23.377	36.600	2392.	2034.	2.1	0.01	277.7	*	287.2	-9.5	-3.41	*	2026.4	7.6	0.37
103	145	17.800	36.466	2386.	2088.	2.6	0.17	355.6	*	374.8	-19.2	-5.40	*	2076.8	11.2	0.54
104	196	17.476	36.448	2383.	2080.	2.6	0.21	358.2*	*	365.0	-6.8	-1.89	*	2076.0	4.0	0.19
105	296	16.988	36.375	2377.	2095.	3.0	0.26	369.2	*	401.1	-31.9	-8.65	*	2077.7	17.3	0.83
106	395	15.822	36.156	2368.	2103.	3.9	0.48	425.1	*	431.2	-6.1	-1.42	*	2100.2	2.8	0.14
107	493	14.429	35.922	2355.	2129.	5.2	0.66	482.2	*	519.5	-37.3	-7.74	*	2114.8	14.2	0.67
108	592	12.957	35.691	2342.	2132.	7.1	0.89	549.4	*	559.6	-10.2	-1.86	*	2128.7	3.3	0.16
109	692	10.956	35.422	2334.	2170.	10.6	1.21	675.3*	*	723.3	-48.0	-7.11	*	2158.5	11.5	0.53
110	793	9.626	35.326	2327.	2167.	11.6	1.29	719.2	*	736.9	-17.7	-2.45	*	2163.0	4.0	0.18
111	893	8.693	35.291	2330.	2182.	12.7	1.33	748.2	*	794.9	-46.7	-6.25	*	2172.2	9.8	0.45
112	991	7.680	35.261	2325.	2176.	13.2	1.32	752.0	*	786.7	-34.7	-4.61	*	2168.8	7.2	0.33
114	1230	5.722	35.132		2176.	13.1	1.25	724.5	*							
116	1527	4.488	35.019	2312.	2159.	12.5	1.17	743.3	*	754.5	-11.2	-1.50	*	2156.6	2.4	0.11
118	1830	4.205	35.031	2318.	2165.	14.3	1.18	715.1	*	758.3	-43.2	-6.04	*	2155.5	9.5	0.44
120	2177	3.721	34.997	2314.	2161.	16.7	1.20	715.2	*	756.2	-41.0	-5.73	*	2152.0	9.0	0.42
122	2575	3.286	34.969	2322.	2165.	20.7	1.22	713.6	*	742.4	-28.8	-4.04	*	2158.5	6.5	0.30
124	2969	2.974	34.947	2320.	2162.	23.1	1.23	716.0	*	736.6	-20.6	-2.87	*	2157.4	4.6	0.21
126	3355	2.668	34.925	2325.	2169.	26.7	1.25	717.9	*	748.3	-30.4	-4.24	*	2162.2	6.8	0.31
128	3752	2.429	34.907	2324.	2168.	30.7	1.28	726.3	*	748.8	-22.5	-3.10	*	2163.0	5.0	0.23
130	4198	2.279	34.892	2333.	2182.	36.5	1.33	737.0	*	778.2	-41.2	-5.59	*	2173.2	8.8	0.40
132	4698	2.229	34.879	2334.	2181.	41.0	1.38	747.1	*	769.9	-22.8	-3.05	*	2176.1	4.9	0.22
134	4949	2.238	34.876	2340.	2191.	42.4	1.40	750.2	*	792.5	-42.3	-5.64	*	2182.1	8.9	0.40
136	5187	2.219	34.873	2341.	2186.	45.4	1.44	758.2	*	765.4	-7.2	-0.94	*	2184.5	1.5	0.07

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-25.8	13.75
DELPCO2/PCO2	23	-4.3	2.11
DELTCO2	23	7.5	3.93

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	234	31 44.8 N	50 45.1 W	5 10 81	5291

			MEASURED QUANTITIES						CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)	
440	8	24.161H	36.439	2383.	2040.	1.8	0.01	280.8	303.5	-22.7	-8.07	2022.6	17.4	0.85	
201	11	24.160	36.437	2383.	2035.	1.0	0.00	279.7	296.5	-16.8	-6.00	2021.9	13.1	0.64	
441	98	19.982H	36.526	2385.	2059.	1.8	0.01	309.6	329.1	-19.5	-6.29	2045.6	13.4	0.65	
442	243	17.174H	36.395	2381.	2097.	2.6	0.24	367.5	398.5	-31.0	-8.44	2080.0	17.0	0.81	
203	307	16.935	36.362	2376.	2091.	2.2	0.27	371.8	394.9	-23.1	-6.20	2078.4	12.6	0.60	
443	387	15.814H	36.155	2364.	2110.	3.9	0.49	427.1	454.2	-27.1	-6.35	2097.7	12.3	0.58	
444	529	13.280H	35.753	2350.	2143.	6.3	0.78	524.7	572.4	-47.7	-9.08	2127.0	16.0	0.74	
205	596	12.306	35.597	2341.	2154.	8.2	1.01	593.6	635.9	-42.3	-7.13	2141.9	12.1	0.56	
445	672	10.262H	35.333	2325.	2170.	12.2	1.31	719.7	759.0	-39.3	-5.46	2161.3	8.7	0.40	
446	865	7.168H	35.143	2321.	2183.	14.0	1.35	777.8	839.8	-62.0	-7.97	2170.9	12.1	0.55	
447	965	6.660H	35.184	2323.	2178.	14.3	1.33	756.7	804.5	-47.8	-6.32	2168.2	9.8	0.45	
207	1050	6.012	35.139	2321.	2171.	13.6	1.28	745.1	777.1	-32.0	-4.30	2164.2	6.8	0.31	
448	1165	5.214H	35.081	2319.	2172.	13.1	1.21	737.5	788.9	-51.4	-6.97	2161.2	10.8	0.50	
209	1337	5.137	35.131			13.7	1.21	717.8							
541	1488	4.402H	35.045	2319.	2163.	13.8	1.17	717.7	745.0	-27.3	-3.81	2156.9	6.1	0.28	
542	1736	3.895H	34.996	2313.	2157.	14.4	1.17	713.8	741.1	-27.3	-3.83	2150.9	6.1	0.28	
211	1784	3.946	35.009	2311.	2157.	14.6	1.18	715.5	749.8	-34.3	-4.79	2149.4	7.6	0.35	
543	1980	3.670H	34.996	2319±3	2163.	17.4	1.20	714.3	745.0	-30.7	-4.29	2156.2	6.8	0.32	17.4
544	2224	3.417H	34.983	2318±3	2160.	20.2	1.22	715.3	735.5	-20.2	-2.83	2155.5	4.5	0.21	20.2
213	2255	3.422	34.984	2324±3	2169.	19.9	1.23	717.1	752.5	-35.4	-4.94	2161.2	7.8	0.36	19.9
545	2469	3.220H	34.968	2324±3	2167.	22.9	1.25	719.2	743.5	-24.3	-3.39	2161.6	5.4	0.25	22.9
215	2606	3.124	34.962	2320±3	2166.	23.6	1.26	720.0	755.6	-35.6	-4.95	2158.2	7.8	0.36	23.5
546	2957	2.888H	34.943	2324±3	2166.	27.1	1.28	721.2	739.7	-18.5	-2.56	2161.9	4.1	0.19	27.0
217	3184	2.706	34.930	2333±3	2175.	30.0	1.30	726.9	744.6	-17.7	-2.44	2171.1	3.9	0.18	30.0
547	3443	2.528H	34.917	2326±3	2169.	30.1	1.28	723.3	745.0	-21.7	-3.01	2164.2	4.8	0.22	30.1

SiO2.

245.

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	234	31 44.8 N	50 45.1 W	5 10 81	5291

	MEASURED QUANTITIES							*	CALCULATED QUANTITIES							
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)	Si02
219	3690	2.368	34.903	2327.+3	2172.	34.7	1.33	728.3	*	755.6	-27.3	-3.75	*	2166.0+3	6.0	0.28	34.7
144	4013	2.262H	34.890	2336.+3	2184.	38.6	1.36	737.9	*	775.6	-37.7	-5.11	*	2175.9+3	8.1	0.37	38.6
142	4412	2.146H	34.874	2336.+3	2186.	44.7	1.43	751.2	*	786.0	-34.8	-4.64	*	2178.7+3	7.3	0.33	44.6
221	4452	2.147	34.873	2341.+2	2192.	44.5	1.43	754.3	*	794.2	-39.9	-5.28	*	2183.7+2	8.3	0.38	44.5
143	4806	2.133H	34.867	2344.+3	2195.	48.2	1.47	762.9	*	795.8	-32.9	-4.31	*	2188.2+3	6.8	0.31	48.2
148	5183	2.147H	34.862	2342.+2	2194.	49.7	1.48	770.8	*	800.5	-29.7	-3.86	*	2187.9+2	6.1	0.28	49.7
223	5205	2.134	34.864	2342.+2	2191.	49.4	1.48	765.4	*	785.6	-20.2	-2.64	*	2186.8+2	4.2	0.19	49.4

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	31	-31.6	10.69
DELPCO2/PCO2	31	-5.1	1.79
DELTCO2	31	8.8	3.79
DELTCO2/TCO2	31	0.4	0.19

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

CTD	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	235	28 12.6 N	53 46.7 W	7 10 81	5358

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
540	10	27.138H	36.874	2414.	2032.	1.4	0.00		265.9					
201	12	27.189	36.816	2416.	2032.	1.5	0.02	251.7	263.8	-12.1	-4.80	2021.0	11.0	0.54
202	69	26.717	36.972	2424.	2042.	1.3	0.02	250.1	269.2	-19.1	-7.63	2024.7	17.3	0.85
541	102	22.763H	37.020	2426.	2069.	1.1	0.00		300.8					
203	147	21.528	36.933	2419.	2074.	1.0	0.02	294.5	314.4	-19.9	-6.75	2059.2	14.8	0.72
204	197	19.464	36.663	2399.	2091.	1.2	0.04	331.4	363.1	-31.7	-9.57	2071.1	19.9	0.95
542	248	18.321H	36.533	2389.	2090.	1.5	0.14		374.6					
205	295	17.976	36.494	2386.	2097.	1.8	0.20	356.4	391.7	-35.3	-9.91	2077.0	20.0	0.95
543	344	17.472H	36.435	2383.	2098.	2.0	0.25		397.9					
206	395	17.127	36.376	2379.	2104.	2.1	0.33	383.1	415.9	-32.8	-8.56	2087.0	17.0	0.81
544	440	16.436H	36.266	2374.	2109.	2.6	0.40		434.2					
207	520	15.209	36.059	2366.	2134.	3.7	0.59	458.7	509.1	-50.4	-10.98	2113.9	20.1	0.94
545	589	13.666H	35.822	2356.	2144.	5.3	0.77		560.1					
208	694	12.423	35.655	2342.	2152.	6.5	0.94	573.5	625.6	-52.1	-9.09	2136.6	15.4	0.72
546	790	10.444H	35.421	2336.	2172.	10.6	1.20		724.2					
547	889	8.697H	35.244	2336.	2189.	14.2	1.44		803.7					
548	985	7.558H	35.160	2327.	2192.	15.8	1.51		861.8					
209	1041	7.138	35.139	2326.	2194.	16.1	1.53	810.2	877.7	-67.5	-8.33	2181.5	12.5	0.57
440	1139	6.298H	35.115	2325.	2187.	16.0	1.44	788.9	842.6	-53.7	-6.81	2176.6	10.4	0.47
441	1338	5.503H	35.116	2325.	2177.	14.6	1.30	745.3	789.2	-43.9	-5.89	2167.8	9.2	0.42
211	1358	5.464	35.114	2327.	2180.	14.3	1.32	744.6	795.0	-50.4	-6.77	2169.5	10.5	0.48
442	1584	4.832H	35.102	2327.	2171.	15.1	1.25	729.1	751.2	-22.1	-3.04	2166.1	4.9	0.22
213	1686	4.595	35.087	2327.	2176.	16.1	1.25	723.5	774.8	-51.3	-7.09	2164.9	11.1	0.51
443	1880	4.135H	35.056	2328.	2173.	18.0	1.25	725.1	756.0	-30.9	-4.26	2166.2	6.8	0.31
444	2174	3.621H	35.011	2333.	2172.	21.7	1.26	725.4	730.9	-5.5	-0.76	2170.8	1.2	0.06

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	235	28 12.6 N	53 46.7 W	7 10 81	5358

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
215	2283	3.146	34.993	2325.	2172.	22.9	1.29	727.0	*	763.3	-36.3	-4.99	2164.1	7.9	0.36
445	2472	3.277H	34.981	2332.	2175.	25.5	1.28	724.8	*	748.7	-23.9	-3.29	2169.7	5.3	0.24
446	2771	3.045H	34.960	2335.	2181.	28.9	1.30	732.1	*	764.7	-32.6	-4.45	2173.9	7.1	0.33
217	2884	2.933	34.949	2336.	2183.	29.8	1.34	727.0	*	770.1	-43.1	-5.93	2173.6	9.4	0.43
447	3268	2.711H	34.932	2333.	2177.	30.1	1.30	723.0	*	753.8	-30.8	-4.26	2170.2	6.8	0.31
448	3568	2.522H	34.916	2332.	2176.	30.9	1.28	723.2	*	752.4	-29.2	-4.04	2169.5	6.5	0.30
219	3657	2.463	34.911	2331.	2178.	32.1	1.33	721.6	*	767.2	-45.6	-6.32	2168.0	10.0	0.46
140	3789	2.379H	34.900			36.0	1.32	723.7	*						
141	4266	2.235H	34.881			40.9	1.37	740.5	*						
221	4560	2.167	34.872	2343.	2192.	45.2	1.46	757.8	*	785.3	-27.5	-3.63	2186.2	5.8	0.26
142	4759	2.098H	34.861	2345.	2197.	49.5	1.47	766.0	*	801.6	-35.6	-4.64	2189.7	7.3	0.33
223	5129	2.109	34.858	2345.	2197.	50.8	1.51	773.3	*	802.7	-29.4	-3.80	2191.0	6.0	0.27
147	5298	2.129H	34.871	2347.	2201.	50.4	1.48	770.0	*	813.3	-43.3	-5.63	2192.2	8.8	0.40

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	27	-35.4	13.75
DELPCO2/PCO2	27	-6.0	2.36
DELTCO2	27	10.5	4.99
DELTCO2/TCO2	27	0.5	0.24

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	236	31 0.0 N	54 27.0 W	8 10 81	5593

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
301	3	25.287	36.315	2373.	2023.	1.4	0.01	272.3	290.3	-18.0	-6.60	2008.6	14.4	0.71
302	81	22.101	36.591	2391.	2069.	1.4	0.09	317.3	337.3	-20.0	-6.31	2055.5	13.5	0.65
303	161	18.241	36.513	2385.	2083.	1.4	0.10	345.3	367.7	-22.4	-6.48	2069.6	13.4	0.65
304	310	17.574	36.472	2386.	2080.	1.7	0.19	348.7	361.1	-12.4	-3.57	2072.5	7.5	0.36
305	414	17.213	36.416	2381.	2093.	2.2	0.23	364.4	391.2	-26.8	-7.34	2078.1	14.9	0.71
306	553	15.529	36.108	2362.	2109.	3.5	0.52	435.6	455.6	-20.0	-4.58	2100.1	8.9	0.42
307	652	13.337	35.836	2352.	2134.	5.0	0.72	501.3	540.4	-39.1	-7.80	2120.0	14.0	0.66
308	791	10.577	35.384	2326.	2167.	10.7	1.25	698.4	741.4	-43.0	-6.16	2157.1	9.9	0.45
309	955	7.821	35.218	2328.	2184.	13.7	1.39	772.8	813.9	-41.1	-5.32	2175.7	8.3	0.38
310	1055	6.658	35.150	2320.	2176.	14.2	1.37	768.1	807.8	-39.7	-5.17	2168.0	8.0	0.37
311	1156	6.083	35.143	2324.	2178.	14.1	1.34	757.8	799.6	-41.8	-5.52	2169.4	8.6	0.39
312	1358	5.398	35.137	2322.	2170.	14.0	1.27	735.4	768.0	-32.6	-4.43	2163.0	7.0	0.32
313	1555	4.539	35.085	2323.	2169.	15.1	1.24	722.3	758.1	-35.8	-4.96	2161.1	7.9	0.36
314	1953	3.351	35.033	2324.	2170.	17.5	1.23	719.0	757.7	-38.7	-5.38	2161.5	8.5	0.39
315	2254	3.460	34.990	2323.	2170.	20.5	1.24	718.6	761.9	-43.3	-6.03	2160.5	9.5	0.44
316	2556	3.186	34.968	2325.	2171.	23.4	1.27	721.5	758.3	-36.8	-5.09	2162.9	8.1	0.37
317	2859	2.965	34.952	2328.	2175.	26.8	1.29	723.4	765.0	-41.6	-5.74	2165.9	9.1	0.42
318	3161	2.752	34.935	2327.	2172.	27.1	1.27	720.5	754.6	-34.1	-4.73	2164.5	7.5	0.35
319	3467	2.574	34.922	2326.	2174.	28.3	1.27	718.6	768.6	-50.0	-6.95	2163.1	10.9	0.50
336	3720	2.415	34.910	2322.	2167.	31.0	1.30	725.1	752.1	-27.0	-3.73	2161.1	5.9	0.27
335	3967	2.324	34.901	2329.	2175.	33.5	1.32	734.9	760.7	-25.8	-3.50	2169.4	5.6	0.26
334	4221	2.258	34.892	2334.	2179.	36.1	1.35	738.0	759.8	-21.8	-2.95	2174.3	4.7	0.22
333	4471	2.185	34.881	2333.	2181.	40.9	1.41	754.7	774.4	-19.7	-2.61	2176.8	4.2	0.19
332	4720	2.127	34.870	2342.	2192.	46.8	1.47	769.2	790.0	-20.8	-2.70	2187.7	4.3	0.20
320	4974	2.114	34.863	2343.	2198.	48.8	1.50	769.0	815.8	-46.8	-6.09	2188.5	9.5	0.43

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	236	31 0.0 N	54 27.0 W	8 10 81	5593

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAM	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
321	5273	2.129	34.861	2344.	2201.	50.3	1.51	772.9	827.1	-54.2	-7.01	2190.2	10.8	0.49
329	5508	2.154	34.861	2347.	2196.	50.3	1.50	784.4	788.2	-3.8	-0.48	2195.2	0.8	0.04
327	5548	2.159	34.859	2347.	2199.	50.4	1.51	781.5	803.2	-21.7	-2.77	2194.6	4.4	0.20
326	5563	2.161	34.860	2347.	2195.	50.6	1.52		784.0					
325	5577	2.162	34.861	2348.	2200.	50.7	1.52		803.8					
324	5587	2.164	34.859	2344.	2199.	50.9	1.52	775.7	816.9	-41.2	-5.32	2190.7	8.3	0.38

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	29	-31.7	11.99
DELPCO2/PCO2	29	-5.0	1.66
DELTCO2	29	8.6	3.31
DELTCO2/TCO2	29	0.4	0.16

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	237	33 3.2 N	56 29.7 W	9 10 81	5547

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
301	10	23.887	36.235	2367.	2021.	0.9	0.00	274.6	*	293.1	-18.5	-6.73	*	2006.4	14.6	0.72
302	57	20.989	36.474	2385.	2054.	0.9	0.01	298.8	*	321.0	-22.2	-7.42	*	2038.1	15.9	0.77
303	81	18.741	36.537	2387.	2085.	1.2	0.05	340.2	*	368.6	-28.4	-8.35	*	2067.8	17.2	0.83
440	101	18.318H	36.533	2385.	2085.	1.6	0.14	345.4	*	371.6	-26.2	-7.58	*	2069.4	15.6	0.75
304	155	17.939	36.520	2386.	2085.	1.7	0.17	342.4	*	370.1	-27.7	-8.10	*	2068.3	16.7	0.80
441	202	17.789H	36.511	2385.	2086.	1.7	0.17	348.4	*	373.2	-24.8	-7.11	*	2071.3	14.7	0.70
305	278	17.617	36.487			1.9	0.19	349.4	*							
442	351	17.338H	36.441	2382.	2088.	1.9	0.23	356.8	*	380.9	-24.1	-6.75	*	2074.2	13.8	0.66
306	448	16.999	36.391	2382.	2096.	2.1	0.27	365.8	*	395.1	-29.3	-8.02	*	2079.8	16.2	0.77
443	497	16.009H	36.188	2369.	2114.	3.3	0.46	422.1	*	453.8	-31.7	-7.51	*	2099.5	14.5	0.68
307	579	15.054	36.019			4.1	0.59	459.2	*							
444	646	13.693H	35.797	2353.	2138.	5.8	0.77	513.8	*	549.5	-35.7	-6.94	*	2125.5	12.5	0.58
308	728	12.256	35.595	2338.	2145.	7.8	0.98	586.0	*	612.8	-26.8	-4.58	*	2137.1	7.9	0.37
445	798	10.229H	35.337	2329.	2168.	11.4	1.27	708.8	*	733.5	-24.7	-3.48	*	2162.4	5.6	0.26
446	895	8.718H	35.227	2322.	2181.	12.8	1.34	758.2	*	824.9	-66.7	-8.80	*	2167.6	13.4	0.61
447	994	7.046H	35.094	2323.	2178.	13.9	1.37	793.3	*	803.1	-9.8	-1.23	*	2176.1	1.9	0.09
309	1048	6.595	35.130			13.3	1.31	766.5	*							
448	1091	6.347H	35.140	2321.	2177.	13.4	1.29	762.8	*	807.1	-44.3	-5.81	*	2168.0	9.0	0.41
310	1133	6.014	35.140	2326.	2176.	13.0	1.26	745.1	*	779.5	-34.4	-4.62	*	2168.7	7.3	0.33
311	1391	4.686	35.032			12.2	1.18	732.1	*							
140	1406	4.518H	35.019	2314.	2161.	12.4	1.16	731.9	*	755.5	-23.6	-3.22	*	2155.9	5.1	0.24
141	1604	4.248H	34.995	2313.	2160.	12.5	1.13	725.2	*	754.5	-29.3	-4.04	*	2153.6	6.4	0.30
312	1640	4.198	34.994	2313.	2161.	12.2	1.16	722.9	*	759.5	-36.6	-5.06	*	2153.0	8.0	0.37
542	1680	4.134H	34.991	2306.	2155.	12.7	1.17		*	760.2						
545	1994	3.847H	34.986	2315.	2162.	14.2	1.17		*	756.2						

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	237	33 8.2 N	56 29.7 W	9 10 81	5547

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
142	2493	3.399H	34.972	2318.	2166.	18.9	1.19	715.3	762.6	-47.3	-6.62	2155.6	10.4	0.48
315	2538	3.330	34.971	2322.	2163.	19.1	1.21	715.5	733.0	-17.5	-2.44	2159.1	3.9	0.18
143	2990	2.935H	34.94 I	2322.	2167.	22.7	1.21	717.9	750.8	-32.9	-4.58	2159.7	7.3	0.34
144	3484	2.521H	34.917	2325.	2172.	25.6	1.20	719.0	761.9	-42.9	-5.96	2162.6	9.4	0.43
318	3576	2.443	34.914	2324.	2169.	26.8	1.23	726.4	751.9	-25.5	-3.51	2163.4	5.6	0.26
145	3928	2.318H	34.901	2327.	2173.	29.8	1.25	729.4	758.5	-29.1	-3.98	2166.7	6.3	0.29
146	4473	2.252H	34.890	2332.	2182.	34.4	1.30	741.4	782.0	-40.6	-5.48	2173.4	8.6	0.39
321	4676	2.263	34.890	2334.	2182.	35.7	1.32	747.5	773.8	-26.3	-3.51	2176.4	5.6	0.26
147	5064	2.251H	34.880	2336.	2184.	39.9	1.35	752.2	774.8	-22.6	-3.01	2179.2	4.8	0.22
148	5518	2.266H	34.872	2342.	2194.	43.6	1.40	759.7	798.8	-39.1	-5.14	2185.9	8.1	0.37
324	5536	2.270	34.899	2340.	2189.	41.6	1.40	755.4	782.8	-27.4	-3.62	2183.2	5.8	0.26

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	30	-30.5	10.54
DELPCO2/PCO2	30	-5.4	1.96
DELTCO2	30	9.7	4.40
DELTCO2/TCO2	30	0.5	0.22

I INTERPOLATED VALUE

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	240	34 48.0 N	55 45.1 W	11 10 81	

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
501	7	24.131	36.400	2384.	2042.	1.5	0.01	270.9	*	304.6	-33.7	-12.43	*	2015.6	26.4	1.29
502	85	22.438	36.403	2383.	2039.	1.5	0.01	285.4	*	301.8	-16.4	-5.74	*	2026.5	12.5	0.61
503	157	15.876	36.184	2373.	2111.	3.4	0.40	403.3	*	439.3	-36.0	-8.93	*	2093.7	17.3	0.82
504	256	14.215	35.877	2354.	2125.	5.2	0.64	575.9	*	510.4	65.5	11.38	*	2147.3	-22.3	-1.05
505	355	12.682	35.646	2348.	2157.	8.0	0.95	574.1	*	624.8	-50.7	-8.83	*	2142.0	15.0	0.70
506	455	11.190	35.457	2338.	2168.	10.4	1.17	655.7	*	700.1	-44.4	-6.78	*	2156.9	11.1	0.51
507	504	10.254	35.342	2332.	2183.	12.1	1.31	721.9	*	791.5	-69.6	-9.64	*	2168.1	14.9	0.68
508	554	8.984	35.201	2324.	2186.	14.5	1.47	793.7	*	844.0	-50.3	-6.34	*	2176.3	9.7	0.44
509	653	7.306	35.101	2324.	2190.	14.8	1.44	803.2*	*	863.6	-60.4	-7.52	*	2178.7	11.3	0.52
510	746	6.316	35.070	2320.	2179.	13.9	1.35	785.8*	*	821.7	-35.9	-4.57	*	2172.0	7.0	0.32
511	846	5.667	35.060	2321.	2176.	13.3	1.28	761.7	*	800.5	-38.8	-5.09	*	2168.1	7.9	0.36
512	926	5.297	35.047	2317.	2171.	13.0	1.24	749.6	*	792.5	-42.9	-5.73	*	2162.1	8.9	0.41
513	989	5.072	35.048	2319.	2171.	13.0	1.23	744.5	*	783.5	-39.0	-5.24	*	2162.8	8.2	0.38
514	1048	4.857	35.030	2316.	2166.	12.8	1.22	740.9	*	771.8	-30.9	-4.17	*	2159.4	6.6	0.30
515	1142	4.551	35.013	2317.	2164.	12.4	1.19	733.6	*	757.4	-23.8	-3.24	*	2158.9	5.1	0.24
516	1229	4.375	35.000	2313.	2161.	12.4	1.18	729.0	*	759.6	-30.6	-4.20	*	2154.4	6.6	0.31
517	1369	4.179	34.994	2315.	2161.	12.7	1.17	722.3	*	751.2	-28.9	-4.01	*	2154.6	6.4	0.29
518	1578	3.982	34.987	2314.	2159.	13.4	1.18	717.8	*	745.9	-28.1	-3.91	*	2152.8	6.2	0.29
519	1784	3.800	34.985	2318.	2162.	14.4	1.18	713.5	*	743.5	-30.0	-4.21	*	2155.3	6.7	0.31
520	1990	3.649	34.987	2316.	2159.	16.6	1.20	713.9	*	738.3	-24.4	-3.42	*	2153.5	5.5	0.25
521	2193	3.489	34.977	2320.	2163.	18.1	1.21	713.9	*	740.8	-26.9	-3.77	*	2157.0	6.0	0.28
522	2395	3.300	34.970	2321.	2162.	19.7	1.22	713.0	*	732.2	-19.2	-2.69	*	2157.7	4.3	0.20
523	2644	3.131	34.961	2326.	2172.	22.6	1.25	716.5	*	758.1	-41.6	-5.81	*	2162.8	9.2	0.42
525	3120	2.729	34.933	2326.	2167.	25.1	1.25	715.5	*	735.3	-19.8	-2.76	*	2162.5	4.5	0.21
526	3340	2.568	34.922	2326.	2168.	26.0	1.25	714.5	*	740.1	-25.6	-3.58	*	2162.3	5.7	0.27

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	240	34 48.0 N	55 45.1 W	11 10 81	

			MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
528	3741	2.392	34.907	2327.	2171.	28.7	1.26	722.5	*	749.9	-27.4	-3.80	2164.9	6.1	0.28
530	4238	2.292	34.896	2332.	2178.	32.3	1.29	733.0	*	762.3	-29.3	-4.00	2171.6	6.4	0.29
532	4813	2.212	34.879	2339.	2187.	40.8	1.38	745.6	*	777.3	-31.7	-4.26	2180.2	6.8	0.31
534	5283	2.210	34.870	2345.	2194.	45.7	1.45	758.5	*	786.4	-27.9	-3.67	2188.2	5.8	0.27
536	5495	2.178	34.863	2347.	2197.	49.9	1.52		*	793.2					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	29	-31.0	21.75
DELPCO2/PCO2	29	-4.7	3.78
DELTCO2	29	1.8	7.34
DELTCO2/TCO2	29	0.4	0.35

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	241	36 17.2 N	56 24.1 W	12 10 81	5440

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
640	10	24.088H	36.297	2378.	2016.	1.0	0.01	270.3	276.2	-5.9	-2.17	2011.1	4.9	0.24
201	13	24.216	36.304			1.4	0.01	265.6						
379	65	23.039H	36.635	2399.	2078.	1.4	0.03	307.6	341.8	-34.2	-11.11	2054.7	23.3	1.12
641	97	20.499H	36.646	2397.	2095.	1.4	0.13	338.8	373.0	-34.2	-10.11	2074.2	20.8	0.99
203	152	18.609	36.549	2385.	2083.	1.6	0.13	342.1	368.1	-26.0	-7.61	2067.3	15.7	0.76
642	245	17.904H	36.508	2387.	2091.	1.7	0.19	347.8	379.3	-31.5	-9.05	2072.5	18.5	0.88
204	375	17.529	36.463	2388.	2098.	2.0	0.22	353.9	390.2	-36.3	-10.24	2077.3	20.7	0.99
643	492	16.366H	36.244	2375.	2122.	3.3	0.49	424.7	461.6	-36.9	-8.69	2105.3	16.7	0.78
205	623	14.353	35.898	2350.	2133.	5.9	0.78	513.8	543.9	-30.1	-5.86	2122.4	10.6	0.50
540	745	11.595H	35.492	2338.	2165.	10.1	1.18	661.8	688.2	-26.4	-3.98	2158.4	6.6	0.31
206	836	9.912	35.278	2331.	2189.	13.4	1.42	762.4	827.4	-65.0	-8.52	2176.0	13.0	0.60
541	894	8.551H	35.155	2328.	2193.	14.7	1.49	816.5	861.6	-45.1	-5.52	2184.6	8.4	0.38
542	990	7.007H	35.097	2324.	2184.	13.9	1.39	796.8	829.7	-32.9	-4.13	2177.6	6.4	0.29
207	1068	6.324	35.086	2324.	2184.	13.3	1.32		829.1					
543	1138	5.699H	35.064	2320.	2178.	12.9	1.27	766.6	815.1	-48.5	-6.33	2168.3	9.7	0.45
208	1216	5.345	35.050			12.7	1.24	745.8						
544	1284	4.995H	35.034	2317.	2169.	12.4	1.22	744.8	782.0	-37.2	-4.99	2161.2	7.8	0.36
209	1389	4.745	35.027	2317.	2169.	12.2	1.20	731.0	781.9	-50.9	-6.96	2158.2	10.8	0.50
545	1481	4.473H	35.004	2316.	2167.	12.2	1.18	733.6	775.5	-41.9	-5.72	2158.1	8.9	0.41
211	1684	4.165	34.986			12.4	1.17	721.6						
546	1778	4.039H	34.979	2313.	2161.	12.8	1.16	719.8	759.2	-39.4	-5.48	2152.4	8.6	0.40
547	2072	3.838H	34.978	2313.	2161.	14.0	1.17	716.2	759.0	-42.8	-5.98	2151.6	9.4	0.43
213	2278	3.669	34.975			15.0	1.18	713.7						
548	2454	3.524H	34.973	2319.	2163.	16.7	1.19	714.3	744.6	-30.3	-4.24	2156.2	6.8	0.31
215	2763	3.256	34.959			18.5	1.20	713.4						

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	241	36 17.2 N	56 24.1 W	12 10 81	5440

			MEASURED QUANTITIES							CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)		PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)		TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
140	3045	3.049H	34.948	2324.	2164.	20.0	1.20		*	728.4						
142	3533	2.643H	34.924	2322.	2169.	23.4	1.20		*	760.3						
217	3622	2.596	34.922			24.0	1.21	716.8	*							
218	3792	2.489	34.915			25.1	1.21	720.3	*							
144	4024	2.380H	34.906	2328.	2172.	27.4	1.23		*	749.6						
219	4184	2.347	34.903			28.7	1.24	726.7	*							
145	4518	2.323H	34.896	2334.	2182.	30.8	1.27		*	772.5						
220	4678	2.323	34.895			31.2	1.27	734.0	*							
146	5018	2.324H	34.891	2333.	2183.	32.9	1.29		*	781.7						
221	5059	2.323	34.891	2334.	2185.	33.4	1.29	738.2	*	787.2	-49.0	-6.64	*	2174.6	10.4	0.48
222	5180	2.327	34.890	2336.	2186.	34.2	1.30	737.5	*	784.1	-46.6	-6.32	*	2176.1	9.9	0.45
223	5336	2.297	34.883	2340.	2190.	39.2	1.36	751.0	*	787.1	-36.1	-4.81	*	2182.4	7.6	0.35
224	5433	2.292	34.880	2342.	2192.	40.7	1.39	753.6	*	788.3	-34.7	-4.60	*	2184.7	7.3	0.33
146	5437	2.297H	34.880	2342.	2194.	39.8	1.38		*	797.9						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	23	-37.5	11.10
DELPCO2/PCO2	23	-6.5	2.22
DELTCO2	23	11.4	5.13
DELTCO2/TCO2	23	0.5	0.25

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

ITU	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	242	38 24.0 N	57 19.0 W	13 10 81	5213

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
271	3	22.854H	35.882	2357.	2023.	1.2	0.03		303.9					
270	19	22.833H	35.881					277.4						
273	30	22.816H	35.876	2355.	2017.	1.3	0.02	278.6	297.9	-19.3	-6.93	2002.2	14.8	0.74
275	50	22.768H	35.845	2354.	2022.	1.2	0.02	274.2	305.5	-31.3	-11.41	1998.1	23.9	1.18
277	71	22.246H	35.674	2350.	2018.	1.2	0.02	280.3	303.1	-22.8	-8.13	2000.8	17.2	0.85
280	92	22.119H	36.460	2389.	2064.	1.2	0.05	299.9	331.1	-31.2	-10.39	2042.1	21.9	1.06
281	169	18.401H	36.544	2390.	2092.	1.7	0.17	345.2	376.7	-31.5	-9.11	2073.3	18.7	0.89
101	300	17.855	36.503	2388.	2093.	1.8	0.20	348.8	381.5	-32.7	-9.37	2073.9	19.1	0.91
102	398	17.553	36.457	2388.	2093.	2.0	0.24	357.1	380.8	-23.7	-6.65	2079.3	13.7	0.65
103	516	16.552	36.285	2377.	2110.	2.9	0.42	406.0	431.4	-25.4	-6.25	2097.7	12.3	0.59
104	646	13.915	35.815	2354.	2146.	6.4	0.87	541.6	572.5	-30.9	-5.71	2135.8	10.2	0.47
105	746	11.668	35.503	2337.	2171.	9.8	1.18	649.0	717.3	-68.3	-10.53	2154.1	16.9	0.78
106	856	9.102	35.207	2327.	2187.	14.0	1.48	792.7	834.9	-42.2	-5.32	2178.8	8.2	0.37
107	997	6.483	35.059	2319.	2189.	14.3	1.40	795.3	881.9	-86.6	-10.89	2172.9	16.1	0.73
108	1146	5.318	35.037	2321.	2174.	13.1	1.27	749.7	790.1	-40.4	-5.39	2165.6	8.4	0.39
109	1295	4.694	35.003	2313.	2171.	12.5	1.21	741.1	809.9	-68.8	-9.29	2156.9	14.1	0.65
110	1495	4.297	34.987	2317.	2163.	12.4	1.18	726.3	752.0	-25.7	-3.53	2157.4	5.6	0.26
111	1744	4.017	34.976	2313.	2163.	12.7	1.17	720.3	768.5	-48.2	-6.69	2152.6	10.4	0.48
112	1993	3.842	34.978	2315.	2162.	13.6	1.17	711.5	755.3	-43.8	-6.16	2152.3	9.7	0.45
113	2291	3.613	34.975	2315.	2164.	15.3	1.18	713.2	765.7	-52.5	-7.35	2152.5	11.5	0.53
114	2590	3.393	34.965	2323.	2166.	17.1	1.19	712.6	741.7	-29.1	-4.09	2159.5	6.5	0.30
115	2887	3.186	34.955	2319.	2164.	18.9	1.19	710.3	748.8	-38.5	-5.42	2155.4	8.6	0.40
116	3236	2.924	34.941	2326.	2168.	20.9	1.20	715.2	739.2	-24.0	-3.35	2162.6	5.4	0.25
117	3486	2.730	34.929	2326.	2167.	22.4	1.20	715.1	734.1	-19.0	-2.65	2162.7	4.3	0.20
118	3734	2.560	34.919	2329.	2172.	23.8	1.20	717.1	745.0	-27.9	-3.89	2165.8	6.2	0.29

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	242	38 24.0 N	57 19.0 W	13 10 81	5213

			MEASURED QUANTITIES						*	CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
119	3983	2.461	34.913	2326.	2171.	25.6	1.21	721.5	*	753.1	-31.6	-4.38	*	2164.0	7.0	0.32
120	4228	2.385	34.904	2329.	2175.	27.9	1.24	725.4	*	759.6	-34.2	-4.71	*	2167.5	7.5	0.34
121	4473	2.338	34.900D	2330.	2177.	33.6	1.29	732.0	*	766.2	-34.2	-4.67	*	2169.6	7.4	0.34
122	4768	2.288	34.892	2336.	2183.	33.7	1.29	734.5	*	769.5	-35.0	-4.76	*	2175.4	7.6	0.35
123	5023	2.279	34.886	2338.	2189.	36.6	1.33	746.9	*	790.3	-43.4	-5.81	*	2179.9	9.1	0.42
124	5212	2.303	34.886	2342.	2186.	37.1	1.34	742.7	*	759.0	-16.3	-2.19	*	2182.5	3.5	0.16

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	29	-36.5	15.71
DELPCO2/PCO2	29	-6.4	2.52
DELTCO2	29	11.2	5.33
DELTCO2/TCO2	29	0.5	0.26

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	243	40 35.7 N	58 25.8 W	14 10 81	5092

			MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	* TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
201	15	21.606	35.512	2340.	2018.	1.2	0.04	284.7	*	313.4	-28.7	-10.07	* 1997.1	20.9	1.03
202	105	14.960	35.449	2336.	2106.	3.8	0.54	471.0*	*	494.4	-23.4	-4.96	* 2096.8	9.2	0.44
640	152	11.265H	35.150	2323.	2136.	6.7	0.89	596.0	*	619.4	-23.4	-3.93	* 2129.3	6.7	0.31
203	230	12.077	35.550	2339.	2173.	9.6	1.17	654.7	*	718.9	-64.2	-9.81	* 2157.2	15.8	0.73
641	301	9.803H	35.246	2328.	2194.	14.7	1.53	816.4	*	869.9	-53.5	-6.56	* 2184.1	9.9	0.45
204	403	8.339	35.116	2321.	2189.	14.9	1.52	828.7	*	874.3	-45.6	-5.50	* 2180.7	8.3	0.38
642	499	6.567H	35.056	2318.	2179.	14.4	1.43	809.5	*	831.7	-22.2	-2.75	* 2174.8	4.2	0.19
205	601	5.827	35.036	2318.	2179.	13.5	1.33	785.3	*	829.9	-44.6	-5.67	* 2170.3	8.7	0.40
646	698	5.127H	35.019	2318.	2169.	12.7	1.26	761.7	*	777.7	-16.0	-2.10	* 2165.7	3.3	0.15
648	847	4.694H	35.007	2313.	2162.	12.2	1.21	744.9	*	765.0	-20.1	-2.70	* 2157.7	4.3	0.20
207	924	4.663	35.006			12.1	1.20	739.6	*						
540	994	4.434H	34.999	2314.	2164.	12.2	1.20	727.5*	*	769.9	-42.4	-5.82	* 2154.9	9.1	0.42
541	1144	4.237H	34.990	2315.	2165.	12.2	1.18	727.3	*	770.3	-43.0	-5.92	* 2155.8	9.2	0.43
209	1223	4.190	34.985			12.0	1.17	725.8	*						
542	1293	4.085H	34.983	2313.	2161.	12.3	1.17	719.8	*	759.2	-39.4	-5.48	* 2152.4	8.6	0.40
210	1395	4.000	34.976	2314.	2158.	12.2	1.16	720.2	*	740.6	-20.4	-2.83	* 2153.5	4.5	0.21
543	1490	3.920H	34.977	2312.	2156.	12.7	1.17	717.8	*	740.1	-22.3	-3.11	* 2151.0	5.0	0.23
544	1736	3.785H	34.977	2314.	2159.	13.5	1.17	713.9	*	745.9	-32.0	-4.48	* 2151.9	7.1	0.33
212	1831	3.742	34.978			14.1	1.17	717.2	*						
545	1985	3.625H	34.974	2316.	2162.	14.6	1.18	713.6	*	751.4	-37.8	-5.30	* 2153.6	8.4	0.39
546	2281	3.422H	34.969			16.6	1.19	711.5	*						
214	2387	3.287	34.961			17.5	1.19	711.1	*						
547	2578	3.140H	34.956	2320.	2164.	18.7	1.19	714.2	*	745.1	-30.9	-4.33	* 2157.1	6.9	0.32
548	2971	2.884H	34.941	2322.	2165.	20.7	1.20	711.6	*	741.6	-30.0	-4.22	* 2158.3	6.7	0.31
216	3157	2.705	34.928	2322.	2168.	22.0	1.19	712.1	*	755.3	-43.2	-6.07	* 2158.4	9.6	0.44

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	243	40 35.7 N	58 25.8 W	14 10 81	5092

			MEASURED QUANTITIES						CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
140	3487	2.540H	34.918	2323.	2170.	24.2	1.21		760.7					
217	3634	2.409	34.909	2326.	2172.	26.4	1.21	718.2	758.0	-39.8	-5.54	2163.2	8.8	0.40
143	3979	2.330H	34.900	2327.	2172.	28.9	1.25		754.1					
219	4152	2.306	34.899			29.8	1.25	727.7						
220	4305	2.295	34.895D	2330.	2178.	31.1	1.26		769.9					
147	4471	2.306H	34.893	2332.	2181.	31.6	1.28		776.1					
221	4653	2.299	34.892			32.1	1.27	729.9						
222	4827	2.307	34.892	2332.	2179.	32.5	1.27		767.0					
223	5008	2.308	34.890	2331.	2181.	32.3	1.27	736.9	780.9	-44.0	-5.97	2171.6	9.4	0.43
148	5058	2.300H	34.884	2337.	2182.	35.1	1.32		760.1					
224	5081	2.301	34.888	2332.	2181.	34.3	1.29		777.1					

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	22	-34.9	12.05
DELPCO2/PCO2	22	-5.1	1.97
DELTCO2	22	8.4	3.77
DELTCO2/TCO2	22	0.4	0.18

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	244	41 31.0 N	58 59.8 W	15 10 81	4888

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	14	17.580	34.525	2288.	2007.	1.5	0.07	323.9	*	355.0	-31.1	-9.59	*	1988.4	18.6	0.93
104	333	9.070	35.166	2320.	2173.	13.4	1.43	786.6	*	793.3	-6.7	-0.86	*	2171.6	1.4	0.06
106	801	4.896	35.009	2306.	2164.	12.6	1.24	747.5	*	806.3	-58.8	-7.86	*	2152.0	12.0	0.55
109	1447	3.997	34.974	2305.	2150.	12.6	1.17	723.0	*	740.6	-17.6	-2.44	*	2146.1	3.9	0.18
111	2095	3.525	34.970	2314.	2161.	15.7	1.19	711.4	*	755.3	-43.9	-6.18	*	2151.3	9.7	0.45
112	2393	3.277	34.961	2315.	2159.	17.8	1.19	712.8	*	741.8	-29.0	-4.07	*	2152.5	6.5	0.30
113	2692	3.020	34.947	2318.	2158.	19.6	1.20	712.1	*	725.8	-13.7	-1.92	*	2154.9	3.1	0.14
114	2990	2.784	34.934	2315.	2157.	21.3	1.20	713.9	*	733.1	-19.2	-2.69	*	2152.7	4.3	0.20
115	3238	2.593	34.923	2320.	2161.	23.2	1.20	716.3	*	731.1	-14.8	-2.07	*	2157.7	3.3	0.15
116	3439	2.472	34.916	2318.	2162.	25.1	1.22	716.8	*	743.8	-27.0	-3.77	*	2156.0	6.0	0.28
117	3639	2.374	34.908	2322.	2165.	26.8	1.23	721.7	*	741.7	-20.0	-2.77	*	2160.5	4.5	0.21
118	3838	2.317	34.902	2322.	2168.	28.6	1.24	723.3	*	756.0	-32.7	-4.53	*	2160.8	7.2	0.33
119	4038	2.288	34.901	2327.	2172.	29.7	1.25	726.8	*	753.8	-27.0	-3.71	*	2166.1	5.9	0.27
120	4236	2.275	34.896	2323.	2168.	30.6	1.26	730.8	*	752.4	-21.6	-2.96	*	2163.3	4.7	0.22
121	4437	2.273	34.894	2327.	2174.	31.5	1.28	730.0	*	764.2	-34.2	-4.69	*	2166.6	7.4	0.34
122	4636	2.276	34.892	2327.	2173.	32.5	1.29	735.2	*	759.8	-24.6	-3.34	*	2167.7	5.3	0.25
123	4805	2.257	34.887	2336.	2181.	35.6	1.31	742.5	*	760.0	-17.5	-2.36	*	2177.2	3.8	0.17
124	4879	2.238	34.882	2336.	2181.	38.2	1.35	743.9	*	760.3	-16.4	-2.21	*	2177.5	3.5	0.16

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	18	-25.3	11.84
DELPCO2/PCO2	18	-3.8	2.13
DELTCO2	18	6.2	3.88
DELTCO2/TCO2	18	0.3	0.19

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	245	42 4.0 N	59 9.7 W	15 10 81	4681

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP ITS-IPTS (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	14	16.095	33.883	2256.	1992.	1.4	0.10		369.4					
116	2585	3.134	34.949	2314.	2163.	17.6	1.18		764.8					
117	2989	2.805	34.932	2315.	2162.	18.7	1.16		755.5					
118	3389	2.498	34.917	2317.	2163.	22.6	1.18		752.3					
119	3689	2.338	34.906	2321.	2169.	26.3	1.22	716.5	764.4	-47.9	-6.69	2158.5	10.5	0.48
120	3986	2.293	34.900	2320.	2171.	27.5	1.22	722.9	778.6	-55.7	-7.71	2159.0	12.0	0.55
121	4186	2.273	34.899	2322.	2171.	28.1	1.23	723.4	769.7	-46.3	-6.40	2161.0	10.0	0.46
122	4382	2.261	34.893	2325.	2177.	31.5	1.27	734.1	786.8	-52.7	-7.19	2165.8	11.2	0.51
123	4575	2.255	34.894	2326.	2175.	30.8	1.26	731.3	773.0	-41.7	-5.70	2166.0	9.0	0.41
124	4677	2.237	34.893	2332.	2185.	35.6	1.32	743.1	796.7	-53.6	-7.21	2173.8	11.2	0.51

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	6	-49.7	4.81
DELPCO2/PCO2	6	-6.8	0.65
DELTCO2	6	10.6	0.96
DELTCO2/TCO2	6	0.5	0.04

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TYP	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
TTO	7	246	42 45.2 N	59 24.5 W	15 10 81	3962

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
540	62	6.517H	33.611	2250.	2090.	4.5	0.67	633.3	*	662.4	-29.1	-4.60	*	2082.8	7.2	0.35
541	250	7.490H	34.991	2311.	2179.	14.2	1.45	825.2	*	864.6	-39.4	-4.78	*	2171.8	7.2	0.33
542	496	4.874H	34.927	2302.	2166.	12.5	1.26	776.3	*	833.9	-57.6	-7.42	*	2154.8	11.2	0.52
543	695	4.542H	34.954	2306.	2164.	11.9	1.20	750.4	*	805.0	-54.6	-7.27	*	2152.9	11.1	0.51
544	843	4.215H	34.935	2304.	2156.	11.5	1.16	734.8	*	772.6	-37.8	-5.14	*	2148.0	8.0	0.37
240	1027	4.064H	34.943	2304.	2157.	11.5	1.16	727.7	*	777.9	-50.2	-6.90	*	2146.4	10.6	0.49
241	1224	3.984H	34.953	2306.	2158.	12.0	1.16	722.5	*	774.0	-51.5	-7.13	*	2147.0	11.0	0.51
242	1521	3.822H	34.956	2307.	2154.	12.7	1.16	723.4	*	751.1	-27.7	-3.83	*	2147.9	6.1	0.28
243	1868	3.645H	34.964	2310.	2156.	14.1	1.17	720.5	*	748.2	-27.7	-3.85	*	2149.9	6.1	0.28
140	2181	3.418H	34.958	2310.	2161.	15.5	1.19	714.2	*	772.5	-58.3	-8.16	*	2148.4	12.6	0.58
141	2473	3.171H	34.949	2316.	2160.	16.9	1.17	713.5*	*	742.2	-28.7	-4.03	*	2153.6	6.4	0.30
142	2712	2.939H	34.940	2312.	2162.	17.8	1.16	707.7	*	768.0	-60.3	-8.52	*	2148.8	13.2	0.61
143	2929	2.763H	34.930	2313.	2157.	18.0	1.15	713.6	*	740.4	-26.8	-3.75	*	2151.0	6.0	0.28
244	3195	2.565H	34.919	2313.	2159.	18.7	1.14	720.3	*	749.3	-29.0	-4.03	*	2152.6	6.4	0.30
318	3286	2.492	34.917	2315.	2162.	19.7	1.15		*	755.3						
245	3391	2.427H	34.912	2310.	2156.	19.3	1.14	715.3	*	747.4	-32.1	-4.49	*	2148.9	7.1	0.33
319	3482	2.393	34.911	2311.	2161.	19.3	1.13		*	767.3						
246	3589	2.348H	34.908	2313.	2163.	19.5	1.13	720.8	*	767.9	-47.1	-6.54	*	2152.8	10.2	0.47
320	3616	2.343	34.909	2313.	2160.	19.5	1.13		*	754.1						
321	3664	2.323	34.907	2313.	2159.	19.9	1.13		*	749.5						
247	3785	2.273H	34.902	2313.	2162.	22.0	1.16	722.0	*	763.9	-41.9	-5.80	*	2152.9	9.1	0.42
322	3863	2.263	34.903	2316.	2164.	22.1	1.16		*	760.7						
323	3934	2.238	34.900	2317.	2163.	24.2	1.18		*	752.3						
248	3979	2.226H	34.897	2321.	2170.	25.3	1.19	731.2	*	768.4	-37.2	-5.09	*	2162.0	8.0	0.37
324	4007	2.230	34.899	2320.	2166.	25.1	1.19		*	753.6						

* DELTA PCO2 > 0.5 %

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	DEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	246	42 45.2 N	59 24.5 W	15 10 81	3962

		MEASURED QUANTITIES						*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	18	-41.0	11.70
DELPCO2/PCO2	18	-5.6	1.57
DELTCO2	13	8.8	2.34
DELTCO2/TCO2	18	0.4	0.11

TALK-TCO2-PCO2 CONSISTENCY TEST — FINAL DATA — VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	247	42 54.6 N	59 30.8 W	16 10 81	3443

	MEASURED QUANTITIES								*	CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
109	1393	3.922	34.956	2306.	2154.	11.9	1.16		*	755.2						
110	1594	3.821	34.977	2303.	2151.	12.4	1.16		*	753.9						
111	1795	3.711	34.965	2308.	2155.	13.6	1.17		*	751.8						
112	1995	3.567	34.962	2307.	2152.	14.5	1.17		*	742.1						
242	2153	3.358H	34.957	2309.	2162.	15.8	1.17	711.5	*	781.1	-69.6	-9.79	*	2147.0	15.0	0.69
243	2438	3.056H	34.944	2311.	2158.	17.4	1.17	711.9	*	753.2	-41.3	-5.80	*	2148.9	9.1	0.42
115	2591	2.988	34.941	2314.	2156.	17.5	1.16		*	732.1						
244	2701	2.854H	34.935	2311.	2163.	17.8	1.16	713.1	*	777.3	-64.2	-9.00	*	2149.1	13.9	0.64
245	2942	2.717H	34.927	2312.	2157.	18.3	1.14	713.7	*	744.0	-30.3	-4.24	*	2150.3	6.7	0.31
118	2990	2.724	34.929	2312.	2161.	18.1	1.15		*	762.8						
119	3119	2.649	34.925	2309.	2157.	18.4	1.14		*	756.5						
246	3131	2.572H	34.919	2312.	2164.	19.1	1.14	717.2	*	777.5	-60.3	-8.41	*	2151.0	13.0	0.60
120	3216	2.586	34.922	2314.	2164.	19.0	1.14		*	769.3						
121	3299	2.527	34.918	2313.	2162.	19.0	1.14		*	763.5						
247	3329	2.489H	34.913	2312.	2156.	19.2	1.14	715.6	*	739.7	-24.1	-3.36	*	2150.6	5.4	0.25
248	3435	2.445H	34.913	2311.	2161.	19.3	1.14	719.1	*	767.4	-48.3	-6.71	*	2150.5	10.5	0.48
124	3458	2.404	34.912	2313.	2164.	19.3	1.13		*	772.7						

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	7	-48.3	16.10
DELPCO2/PCO2	7	-6.8	2.26
DELTCO2	7	10.5	3.38
DELTCO2/TCO2	7	0.5	0.16

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

110	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	248	43 0.8 N	59 35.1 W	16 10 81	2946

	MEASURED QUANTITIES								CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
101	7	13.663	32.170	2174.	1966.	1.4	0.20	419.8	446.8	-27.0	-6.44	1955.2	10.8	0.55
102	47	5.622	33.388	2237.	2091.	5.4	0.75		714.2					
104	98	7.702	34.453	2287.	2128.	7.6	0.94		702.2					
105	160	8.722	34.967	2306.	2154.	10.11	1.1 I							
106	241	7.196	34.909	2304.	2176.	13.3	1.39		881.7					
111	1379	3.882	34.960		2153.	12.3	1.16	719.0						
115	1780	3.669	34.968	2310.	2155.	13.8	1.17	715.4	743.5	-28.1	-3.93	2148.8	6.2	0.29
116	1780	3.669	34.967	2309.	2160.	13.8	1.17	715.6	771.4	-55.8	-7.80	2147.9	12.1	0.56
113	1781	3.669	34.967	2307.	2155.	13.9	1.16	711.4	755.9	-44.5	-6.25	2145.2	9.8	0.45
118	2161	3.391	34.960	2310.	2154.	15.4	1.17	714.8	739.2	-24.4	-3.42	2148.6	5.4	0.25
119	2358	3.177	34.950	2311.	2163.	16.5	1.16	711.5	777.4	-65.9	-9.26	2148.7	14.3	0.66
121	2664	2.951	34.942	2312.	2157.	17.3	1.16	714.4	744.3	-29.9	-4.19	2150.4	6.6	0.31
122	2767	2.873	34.935	2312.	2157.	17.4	1.15		744.3					
123	2876	2.815	34.935	2312.	2159.	17.4	1.14	714.5	753.6	-39.1	-5.47	2150.4	8.6	0.40
124	2933	2.790	34.935	2311.	2155.	17.9	1.14	715.0	739.2	-24.2	-3.38	2149.6	5.4	0.25

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	9	-37.7	14.13
DELPCO2/PCO2	9	-5.6	1.94
DELTCO2	9	8.8	2.98
DELTCO2/TCO2	9	0.4	0.14

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TTO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	249	43 23.8 N	59 46.8 W	16 10 81	2001

			MEASURED QUANTITIES							CALCULATED QUANTITIES					
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (O/OO)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	*	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (O/O)	*	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (O/O)
109	10	14.4218	32.174	2175.	1952.	1.2	0.16	396.1	*	410.2	-14.1	-3.56	*	1945.8	6.2	0.32
111	114	9.234	34.957	2308.	2136.	8.5	1.02	644.9	*	667.0	-22.1	-3.43	*	2130.3	5.7	0.26
113	399	5.366	34.914	2303.	2173.	13.5	1.34	810.1	*	868.5	-58.4	-7.21	*	2162.3	10.7	0.49
115	695	4.265	34.925	2301.	2152.	11.1	1.17	740.1	*	765.8	-25.7	-3.47	*	2146.6	5.4	0.25
117	992	4.087	34.939	2307.	2157.	11.4	1.15	732.8	*	764.8	-32.0	-4.37	*	2150.1	6.9	0.32
119	1292	3.974	34.949	2309.	2156.	11.8	1.15	724.8	*	751.6	-26.8	-3.70	*	2150.2	5.8	0.27
121	1642	3.889	34.956	2306.	2158.	12.2	1.16	723.7	*	774.5	-50.8	-7.02	*	2147.1	10.9	0.50
123	1895	3.862	34.958	2306.	2156.	12.8	1.16	719.8	*	764.9	-45.1	-6.26	*	2146.2	9.8	0.45
124	1989	3.829	34.959	2306.	2160.	13.2	1.17	721.9	*	784.1	-62.2	-8.61	*	2146.8	13.2	0.61

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	9	-37.5	16.14
DELPCO2/PCO2	9	-5.3	1.88
DELTCO2	9	8.3	2.71
DELTCO2/TCO2	9	0.4	0.12

TALK-TCO2-PCO2 CONSISTENCY TEST FINAL DATA VERSION 2 PCO2X AND TCO2X SUBROUTINES

TIO	LEG	STN	LATITUDE	LONGITUDE	DATE	BOTTOM
	7	250	43 36.0 N	59 52.0 W	17 10 81	138

	MEASURED QUANTITIES								CALCULATED QUANTITIES						
SAMP	DEPTH (M)	TEMP INSITU (DEGC)	SAL (0/00)	TALK (UEQ/KG)	TCO2 (UM/KG)	SIO3 (UM/KG)	PO4 (UM/KG)	GC PCO2 20C (UATM)	PCO2 20C (UATM)	DELPCO2 (UATM)	DELPCO2 /PCO2 (0/0)	TCO2 (UM/KG)	DELTCO2 (UM/KG)	DELTCO2 /TCO2 (0/0)
116	7	13.481	31.430	2139.	1943.	1.4	0.24		456.3					
117	22	11.696	31.769	2155.	1979.	2.7	0.41		529.0					
118	42	5.644	32.538	2198.	2073.	6.0	0.81		784.2					
119	57	4.528	32.790	2212.	2092.	7.2	0.92		825.9					
120	72	5.152	33.262	2232.	2099.	6.6	0.84		774.7					
121	87	5.788	33.631	2247.	2100.	6.3	0.83		719.7					
122	101	5.863	33.890	2259.	2121.	8.0	0.95		776.4					
123	116	7.466	34.359	2277.	2121.	8.0	0.95		708.5					
124	132	8.973	34.919		2137.	8.9	1.05							

STATION STATISTICS

	N	MEAN	SIGMA
DELPCO2	0	0.0	0.00
DELPCO2/PCO2	0	0.0	0.00
DELTCO2	0	0.0	0.00
DELTCO2/TCO2	0	0.0	0.00

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